

INTERNAL MIGRATION

The New World and the Third World

Edited by Anthony H. Richmond
and Daniel Kubat



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The New World and the Third World

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The New World and the Third World

Edited by

Anthony H Richmond
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and

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PREFACE

This volume is based on a selection of the papers on internal migration presented in the sessions of the International Sociological Association's Research Committee on Migration at the VIII World Congress of Sociology held in Toronto, Canada in August, 1974. They have been supplemented by some additional material, including an introduction which reviews the papers and discusses their significance in relation to the contemporary character of internal migration in developing and advanced societies. The editors have taken the liberty to revise some of the papers for publication, particularly those which were originally translated into English from some other language.

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York University, Toronto.

August, 1975

INTRODUCTION

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The study of migration, perhaps more than any other branch of demographic sociology, is beset with difficulties of a proper measurement of human relocations and with uncertainties as to the motivations which propel people to move from place to place. The technical definitions of migration (Shryock, Siegel, and Associates, 1971) are weakened by differing jurisdictional definitions of political areas, by differing cultural homogeneities of political units, and by discrepancies in the size of political units. Resettling to a neighboring village only a few kilometers distant may imply a bona fide migration which a relocation some 20 miles across a megalopolis may not, even though a county line may have been crossed in the latter case, but not in the first. An actuarial monitoring of migration, already hampered by definitional problems, becomes almost impossible in countries without an adequate population register, and where proper population registers are available, their utilization is far from simple or inexpensive.

Difficult as measuring migration may be, it can be adequately and patiently overcome, at least to the extent that the measures of migration are numerically comparable and the rates of migration represent known numerical values. The uncertainties as to the motivations of human movements, however, represent the crux of the *explanandum* of migration. More likely than not, the regularities of migration, those

few there are, are a function of the cultural matrix within which they take place, while the motivations to migrate are actually the need to find a place from which one need not migrate. Both of the constraints, the cultural and psychological, are underlaid by demographic pressures.

It is more difficult to tap the regularities of human movements conceptually than it is to ascertain the other two basic demographic facts: the regularities of deaths, which are unequivocal and inevitable, and the regularities of births which, although not inevitable, remain plausibly certain. The attempts of Ravenstein to formulate 'laws' from the observed regularities of human migrations yielded but idiographic statements portraying a life-cycle response to population pressures in the countryside, the out-migration being abetted by a high mortality in the cities both in Europe and in the British Isles.

The century-old debate whether or not there are or can be theories of migration without there being 'laws' of migration resulted in a disagreement among the scholars; the disagreement stemming mostly from a broad interpretation of what a theory is and from a narrow interpretation of what a 'law' is when, after all, a law is but a theory statement.

Bouvier, Macisco and Zarate (in this volume) favor theories of middle range which, at least by our definition, are idiographic statements. Nonetheless, an idiographic statement within a single cultural matrix does have the validity of a natural law and thus, by extension, is very useful for policy formulation. To make sense, any policy formulation must be culture-bound.

Policy formulations, explicit in modern societies and articulated to be of regulatory nature, have their social equivalents in customs and practices of the traditional societies. Sending sons and daughters 'abroad' to gain experience and wealth favors out-migration, as does, for instance, the custom of exogamy. Naim (in this volume) discusses *merantau* which is clearly a cultural constraint to migrate and thus is only marginally responsive to other variables of social, economic, or environmental variety. It is through the constraints of the cultural matrix that demographic pressures acquire a certain regularity, even though this regularity does not match the necessary occurrences of births and deaths.

The motivation to migrate, filtered as it is through the cultural matrix and underlaid by demographic pressures may represent nothing more than a balancing mechanism of individual needs, whether eco-

conomic or social, the primacy of either emerging when the others are met.

In the modern industrial and post-industrial nations only one half of the population has lived at the same address between two subsequent censuses. Human history is an account of migrations of peoples all in search of a place to stay. Hence the difficulty in constructing theories based on the differential characteristics of migrants and non-migrants. Considering the costs of uprootedness, the costs of carving out a new niche for oneself, the costs of personal exertion to get what the non-mover already has, one could argue and not without merit against Everett Lee (1966), that it is the stayers who are 'better' as they get what they have without much of an effort. Should one be able to maintain that the evolution of human efforts runs in the direction of resisting hard work and that social change occurs when people have an excuse to abandon a cultural constraint weighing heavy on their hands, then the migrants would be seen in a different light, perhaps like those unfortunate souls in the Middle Ages who were transient and mendicant.

The 'transilients' of Richmond (1969) are portrayed as successful inter-urban and international migrants, but they are, nonetheless, selling their skills to highly immobile institutions. Again, one could argue that, on the basis of wealth alone, the 'transilients,' well paid as they may be, do not penetrate the established business and political elites of their host countries, even though their children may.

It is not that these comments should encourage the reader to draw away in horror from the state in which the study of migration finds itself. Rather, these comments should illustrate the difficulties with which the sociologists of migration have to cope. This volume bears witness to the diversity of approaches, all illuminating, which a study of migration takes. In spite of all the uncertainties of the theories of migration, there are some bases for an explanation of migration, even though the form the migration takes is so idiosyncratic and culture-bound that it can only be catalogued.

The dynamics of human populations have always produced a surplus population which had to relocate, either physically, which is the concern of the students of migration, or vertically within the social structure, which is the proper concern of the students of human organization and social mobility. Throughout most of history the readjust-

ment of population growth through mortality was a forceful Malthusian check on the population surpluses. On the other hand, the present-day populations are expanding at a considerable rate which is at variance with the manpower needs of any society. Here, the redistribution of the surplus population through migration appears disrupting.

The transformation of the 'wretched and the poor' who passed by the Statue of Liberty to the New World is now complete and the wealth of the country allows even the welfare poor to migrate, not out of economic necessity, but to satisfy their psychic needs for friends and kin (DeJong and Ahmad, in this volume). The Third World countries have inherited the dubious benefits of a low mortality from the very countries for whom high mortality was as beneficent as emigration (Europe), or where space and natural resources turned a rapid population growth into a blessing (the New World). Now, the Third World countries are faced with massive population movements to their primate cities and with some population loss in their small towns, both resulting in a disruption of the traditional social fabric without adequate time to foster new and appropriate institutions (papers in the section of 'Empirical Findings' in this volume). Unilateral governmental intervention via resettlements like those in Indonesia (Naim, in this volume) are less effective than the forced and administrative resettlements which characterized Europe during and immediately after the second World War. In any case, such mass resettlements that have taken place, betray a less than complete regard for individual liberties.

What are the societal mechanisms of coping with migration? And, what are migrants' coping mechanisms with society, that is, with their new status? The 12 papers in this volume address themselves to individual issues at different levels of abstraction and in different degrees of specificity. The editorial division of the papers into sections on Theory, Methods, Findings, and Policies is standard enough not to require a special justification and, at the same time, it does reflect the tenor of migration studies in the different areas of the world.

In their effort to elaborate a theory of migration, Bouvier, Macisco and Zarate have concentrated on a seemingly innocuous and a very sensible variable of education and have developed a fourfold framework for classifying migration. This scheme is based on the comparison of migrants and non-migrants both at the origin and at the destination, the formal educational attainment of migrants being either lower or higher

than that of non-migrants. As a logical scheme, the theory excludes the class of migrants of the same educational attainment as non-migrants, both at the origin and at the destination. The reason for the exclusion is, of course, methodologically necessary, but unfortunate logically as the population falling into the omitted class cannot be discounted. There are two ideal typical societies where this is the case. In post-industrial societies where educational attainment is just about universal at the secondary level, such attainment loses its discriminant function for the majority of population including the migrants. Secondly, in traditional societies a uniform lack of formal educational attainment fails again to be discriminatory between the migratory statuses.

Another point worth raising is the problem of applying the completed years of schooling as a true measure of educational achievement, implying bona fide intellectual differences between persons with different educational attainment. Whereas this may be true for industrial societies (where a host of differentials can be observed), it is indeed not likely to be true for traditional societies. For instance, migrants' social status need not co-vary with a formal educational attainment (Iutaka and Bock, 1972), nor are social class and intelligence as much related as social class and education (Andreski, 1964). For that matter, intelligence and education need not be closely and positively related in post-industrial societies where school graduation represents a compensation for a minority status, a reflection of ability to pay tuition or, simply, is a function of achieving a certain age.

The number of objections one can produce to any new theoretical formulation appears to be directly proportional to the falsifiability status of that theory. It is very unlikely that what the logicians call empty statements would produce much of substantive criticism. In such a light should the comments on the papers in this volume be viewed.

Even though substantive generalizations based on data from countries whose enumeration systems are beyond reproach often fail when applied cross-culturally, methodological refinements based on such data have a degree of universality in them. What this means is that one cannot expect methodological refinements in an analysis of migration unless one has a solid base of reliable statistics. Using data from Ontario, Canada, to prepare population projections for individual counties, MacLeod has attempted to mathematicize the expected

regularity of migration. The philosophical basis for such an attempt would be lodged in the theory of large numbers. Large numbers exhibit a central tendency which shows regularities within some reasonable range of variance when applied to human behavior. On the other hand, migration has essentially the function of population redistribution. Thus, were migration to reflect the flattening sinus curve of declining fertility, after a number of generations it will reach a level of inter-urban population exchange where the net migration is zero. This is, of course, predicated on the fact that the population will remain closed. One may anticipate that most societies will become closed demographically, after the international migration other than exchange migration has become unwelcome. One may also anticipate that a stabilization of birth and death rates will not only produce a stationary population in the long run, but also a regional equilibrium and rural-urban equilibrium.

Lord Keynes is often quoted as saying that 'in the long run, we all will be dead.' Fortunately for the migration patterns which can be fitted to a Gompertz curve, for instance, the exactness of fit is exhausted as soon as a new cohort of migrants starts a new time series. Perhaps the major problem inherent in the mathematicization of that human behavior not subject to a biological determinism of births and deaths is best illustrated by the following parable.¹

A team of demographic sociologists from a distant planet visits the Earth to study migration streams of earthlings. Their extra-terrestrial vehicle cannot land but it hovers at a fair distance from the ground. Stationing themselves above a metropolitan area, they are able to observe the vehicular traffic. They immediately notice the regularity with which the particles cumulate at various nodes until for reasons unknown to the observers they disperse again; furthermore, the visitors notice that there are fluctuations in time and by the distance from the central nodes. Unable to understand the internal mechanisms which may be controlling such behavior, the visitors are still able to devise a satisfactory statistical 'understanding' of the movements. The statistical theorems, roughly similar to those derivable from the Bosean statistics, tell them that the probability of additional particles accumulating in certain nodes increases with the number of those already stationary but, once a certain tolerance limit is reached, push factors disperse the

particles. This process repeats itself with a varying intensity which is inversely proportional to the distance from the central nodes.

The moral of the story is that no amount of mathematical modelling of human behavior will offer a key to the understanding of that behavior but it will describe it very conveniently and succinctly. It must be emphasized here that the job of sociology is to offer a shortcut description of the regularities of human behavior which would not be obvious from personal experience alone. Mathematical projections may serve as predictions when the future date is near and the governments remain libertarian.

Even in a society not particularly known for the liberties it affords its citizens, however, the movements of the population present problems of administration and management. In their study of Siberian rural settlements, Zaslavskaja and Liashenko found that the attraction of large population centers produced a certain disequilibrium in the age and sex structure of very small communities. To what extent the intent of the Soviet government to 'liquidate' small agricultural communities was facilitated by voluntary out-migration of the youth to larger centers has to remain unanswered. The better social conditions in the larger centers seem to support the theory that economic factors are responsible for the migration pull. This is so especially when an administrative nudge to migrate cannot be but suspected.

The second of the papers presenting migration findings for Asia deals with Taiwan. There, under the Japanese administration in the first half of this century, a settlement of the eastern provinces was effected by considerable migration to those areas. Unfortunately, Li does not elaborate on the political constraints which could be responsible for the migration from the more developed to the less developed regions. His analysis is based on a time series of census data covering, roughly, the period of the Japanese administration.

One intriguing finding in Li's paper is the high rate of migration for the aged. Such a finding is difficult to explain on substantive grounds. For instance, the rates for in-migration of the aged into the eastern regions of Taiwan are higher than for those between 20 and 24 years of age. Even for places, like Florida, which are known for attracting retired persons such migration rates would be unusual. The Census Survival Rates were used to arrive at a residual surplus of population by age groups at each subsequent census. Li believes that the enumer-

ation for the whole of Taiwan is fairly reliable. On the other hand, the fact that the very high migration rates for the aged have disappeared for the censuses starting about 1930 should lead us to believe that older persons were underenumerated during the earlier censuses and in addition, that the age reporting may not have been entirely satisfactory. Innocent of any suspicion that small numbers have their way with the decimal points, one should be inclined to trace unusual findings to the problem of data.

Whereas unusual findings make a demographer wary of the vagaries of data, surprise-free findings require a theoretical validation. Premi illustrates this problem with his study of a small town suffering from excessive out-migration. The findings on Sadaura, a small town in India, show a town of less than 10,000 population at the present time, somewhat larger in the earlier times. The out-migrants are in their twenties, women slightly younger than men, men out-migrating more than women and more often while single; out-migrants are better educated than stayers, this being truer for men than women.

This information was arrived at by interviewing the stayers about those who migrated. The two profiles of the stayers and migrants were then juxtaposed, using sex ratio, age and sex composition, marital and educational status as variables for comparison.

It may be surmised that the underlying natural increase of Sadaura's population more than amply provides the manpower needs of the community. The town serves, no doubt, as a service center for the outlying agricultural areas and thus offers an insufficient labor market for the number of men and women it raises and educates. The surplus women are likely 'traded off' in marriage to adjoining communities. The town being very old, the population surpluses have been present for some time; thus, one may assume a well-ingrained cultural expectation to out-migrate. Over the years the institution of out-migration has become too successful; that is, more people out-migrate than need to. For this reason one may understand the concern of the Indian central government about its depopulating country side and its swelling cities.

Most of the out-migrants go to large cities but some go to other rural areas or other small towns, women being more likely to move to nearby towns as brides. In this fashion kinship networks become established over time, generating property transfers; this invites migra-

tion not directed to large cities. To those one migrates without many personal contacts. In turn, newcomers brought to Sadaura for reasons of marriage or property mitigate the effects of out-migration.

The role which kinship or the size of place play in migration is shown in the paper on Thailand. Goldstein and Pitaktepsombati have analyzed migration data from a large Bangkok sample of male heads of household. The findings are essentially surprise-free and can be summarized as follows: the flow of very young migrants from rural areas into Bangkok has diminished in recent years while the other urban areas began to receive more than their customary share of in-migrants. In addition to migrants from rural areas, the new in-migrants come also from other urban places and are in the middle ranges of the occupational categories. Similarly, the new migrants are less likely to be only one-time migrants.

What distinguishes the Thailand study from other studies reported in this volume is not only the size of its sample but, mainly, the list of caveats concerning the validity of the data. A list of caveats is always expandable. For instance, were one to assume that a generation ago migrants into the city had a higher fertility than the urban born, the over-representation of those in the sample who arrived in Bangkok before the age of 15 and who were one-time migrants only is understandable. In this way, the number of male heads of household assigned a migrant status increased, compared to counting as migrants only those who migrated as independent adults. Similarly, considering kinship as a variable in migration selectivity and destination, the classical model of short migration routes for women would establish a network of female kin, now married in other urban places. This would facilitate inter-urban migration and the 'circular' migration Goldstein and Pitaktepsombati found to be modal in the recent years.

Data like these help to support a migration theory of urbanization.² In the developing economies the first target of migration is the primate city which grows much faster than all of the population or than other urban places. Economic development takes place concomitant with but not caused by the population growth, due to the economic interdependence of the world. Once the economic level of the country is raised, a variety of new employment chances offer themselves in other urban places while the employment opportunities of the unskilled workers in the primate city decrease. An increase in the skill level and

in the productivity of the country affects the other urban places positively allowing for an additional absorption of unskilled migrants.

In the United States, for example, where the abundance of natural resources as well as the equalitarian production processes allowed for a rapid cumulation of wealth, the potentially 'primate' cities like New York or Chicago never eclipsed other urban areas. On the other hand, in the Canadian province of Quebec, where the natural resources were not as abundant and where the production processes and social organization were not as equalitarian as those south of the border, Montreal did assume the role of a primate city for a considerable length of time, the other urban places trailing far behind in their size.

Similarly, nations whose wealth was derived from their colonial possessions developed primate cities like London or Paris despite the fair amount of wealth within the country proper. Migration streams to such cities were occupationally bimodal, attracting professional talent as well as servant population, as was the case of Vienna before World War I.

In the last 20 years or so, the rapidity with which primate cities in the developing countries grew and matured was substantially greater than their rate of growth in earlier times. This is derived from two factors: a fairly high fertility in the cities as well as in the countryside and secondly, underlying the first factor, a sharp curtailment of mortality, especially of infant mortality. It is the infant mortality which determines effective fertility, that is the number of children growing up adult. The increase in effective or resultant fertility spurred out-migration from the countryside where already there were cultural constraints to out-migrate; secondly, it promoted a rapid growth of the primate cities. The sheer numbers of people and the tasks performed could not but generate some wealth, overflow of which became redirected to other urban places.

The paper by Naim, dealing with Indonesia, spells out in some detail the various forms of migration of which only one, the *meraunta*, is the 'true' migration. Here, a young man is encouraged to go to a different cultural region to gain experience and 'wealth.' Thus, a variety of other factors usually associated with the push or pull factors of migrations, namely population pressures, ecology, economic development, climate, or political intervention are found only to modify the cultural constraints to migrate.

All the papers on migration in Asia, disparate in their methods and in the purpose by which they were informed, are mainly concerned with tracing migration patterns and establishing differentials between migrants and non-migrants. As much as the profiles of migrants follow similar contours and as much as their migration trajectories coincide, there emerges a need to investigate not so much the motivations to migrate as the institutions of out-migration, that is, the cultural matrix in which migration takes place.

In the case of the African continent, especially its sub-Saharan belt, adequate sources of data are difficult to access. Like anywhere else, international migration is being sufficiently researched (International Migration Review, 1974), but many aspects of internal migration remain elusive. The two papers dealing with internal migration in Africa are issue oriented, the issue being the relationship of migration to unemployment.

Gugler offers an essentially economic explanation of migration, where the decision to migrate is dependent on the opportunity cost to migrate. This cost has decreased the more marginal the groups have become which send out migrants. That is, apart from and in addition to the population pressures, the disorganization of the kinship network, the drop in the level of livelihood in agriculture, the attraction of the city, personal connections, expected wages, all these depress the opportunity cost to migrate.

Gugler found that once the migrant has entered the city, he encounters deterrents to return home even though his expectations are not met. One may add that similar constraints against males returning home were found in the New York City area, for instance. The mid-Manhattan study (Srole et al., 1962) found a disproportionately higher number of men than women in the categories of the mentally unwell. An explanation was offered suggesting that women who do not succeed in the city may return home as an act of virtue whereas the return home of males is interpreted as an indication of failure. Thus males do not return to their place of origin, unless their visit to the city was culturally circumscribed for the purpose of wealth, education, or fame.

Palen, who is concerned with estimating in-migration into the primate city of Addis Ababa, concurs pretty much with Gugler in his estimate of the relationship between unemployment and migration. What both papers seem to treat lightly, is the role of the changing

demographic situation in Africa. Historical references going back much further than 20 years should be viewed from a perspective of a much slower population growth which was hampered by heavy mortality. Despite the fact that an assessment of fertility in the tropical Africa area was and is beset with difficulties, one can estimate the natural rate of growth even today to be at least between 2.5 and 3 percent annually. The rate was lower prior to the sharp decline of mortality brought about by the mass health measures.

One of the interesting and consequential findings which Gugler points out and which is indirectly corroborated by Palen, is that any increase in wages of the urban employees attracts a number of dependent relatives from the countryside, who stay with their better off cousins while looking for work. Such a situation produces severe dilemmas for those who wish to formulate policies of disincentives to migrate into the cities.

The findings for tropical Africa and those for Asia find their echo in the migration conditions in Latin America. Hogan and Berlinck, in their study of migrants and their first jobs in the city of Sao Paulo, found a positive relationship between personal ties to somebody in the city and a successful in-migration. These ties proved to be of more importance in recent years than they were during the dramatic growth of Sao Paulo about 20 years ago. Clearly, this situation parallels that found by Goldstein and Pikepsombati for Bangkok.

At a time when the migration into the primate cities of Latin America was at its peak, the growth of the cities was advanced by the high fertility which the migrants brought with them. It is known from the studies of social mobility that group mobility allows for the group values to remain in force, whereas individual mobility requires anticipatory socialization. One may surmise that similar constraints operate in the case of migration.

When Iutaka, Blumer and Berardo controlled for education, they found that the differentials of fertility between migrants and non-migrants disappeared, indicating that the traditional association between high fertility and rural origin is a function of lack of education and not of the migration status. Nonetheless, in-migration of high fertility migrants into the primate cities sped up the process of the 'maturing' of the country's urban structure, encouraging in due time migration to the other urban places. No doubt, the mass media plays

a role in equalizing the rural with the urban areas and the primate city with other urban areas and thus makes the in-migration into the other urban places acceptable.

Once there are several choices of migration destination and the advantages and disadvantages are muted by advance information and found to be balancing out, then the motivation to migrate may fall back on the satisfaction of psychic needs, for instance of being with friends and relatives. DeJong and Ahmad, in their study of the migration of welfare clients in the State of Pennsylvania, in the United States, found that it was the personal relationship sought which proved to be a factor in migrating. In other words, where the welfare benefits were not much different from those one could find elsewhere and when other sources of income either did not appear realistic or were not thought about, the decision to move was predicated on personal ties at the place of destination. In some way, translated into a different economic condition, the classic proposition of Veblen was found to hold. Namely, wealth allows for an elaboration of mannerism. In other words, when the economic circumstances are constant and there are no other priorities for action, one spends one's time elaborating resources available; in this case one moves for psychic gain to be with friends or relatives.

One can also paraphrase the Veblenian theorem as it applies to the study of migration. Namely, when data on migration is plentiful and the methodology quite advanced, one can proceed with an elaboration of migration policies to stylize, as it were, the findings and make the underlying migration pattern conform to the expected theoretical formulations. The paper by Brandt offers just one example of a policy implication of directed migration. Brandt cannot help but notice, however, that one cannot legislate migratory behavior which will run counter to the prevailing settlement and housing patterns, even though a liberal ideology may wish for a good racial and social mix in the new towns designed for just that purpose. Migration, after all, does reflect personal preference when it is voluntary and is never likely to conform to 'humanitarian' policies.

Migration may very well function as an equalizer of population pressure and as a factor in population redistribution; but, at the same time, it functions as a homogenizing influence on neighborhoods and a differentiating influence between neighborhoods. Whether such population movements take place in the New World or in the Third

World, it seems to result from the need of men to find a place from which they need not move. Such need, in this world, appears to be an almost utopian wish and the students of migration may expect to have their hands full for some time to come.

NOTES

¹ An adapted version of what I heard, some 20-odd years ago in Munich, in the seminars of Professor Aloyz Wenzl lecturing on the philosophy of science.

² For similar but not identical formulations cf.: Lughod, 1965; Gist and Fava, 1974; Davis, 1965, and 1969, 1970; Professor Iutaka's comments in the session in Internal Migration: Developing Countries, the VIII World Congress of Sociology, Toronto, 1974.

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I THEORIES

TOWARD A FRAMEWORK FOR THE ANALYSIS OF DIFFERENTIAL MIGRATION: The Case of Education

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and Alvan Zarate

The formulation of migration theories is a questionable practice due to the changing and multiple usages of the variables involved. However, it is the purpose of all science to develop increasingly broad theories which explain facts as they happen within any given discipline. A good theory establishes order out of what was formerly chaos. It ties together observed facts and hypotheses and explains on a relatively abstract level what often appear to be random and even contradictory occurrences.

In his 1952 presidential address to the Population Association of America, Rupert Vance asked "Is Theory For Demographers?" While disclaiming any attempts at systematic theory he argued that "The consensus of the future to which we demographers look forward will more likely in Robert Merton's phrase come out of theories of the middle-range . . ." Vance continued: "...we will not build demography until we learn, like the physical scientists, to repeat and repeat. Our smaller studies, those below the middle-range, must be focused more and more on specific hypotheses already set up and embodied

The authors would like to emphasize that the views expressed in this paper are their own, and do not necessarily reflect those of any agencies with which they may be associated.

in these systematic formulations. Like science everywhere, demographic analysis must be made cumulative.” Middle-range formulation is the goal of this exercise. We stress not only that such studies should be repeated, but such repetition must be accompanied by continuous evaluation and syntheses of existing knowledge. A middle-range framework will be proposed for explaining differentials both cross-culturally and between sub-groups in a society. While this paper will be concerned with educational differentials it should apply to other characteristics traditionally studied such as labor force and fertility.

The development of theories in migration has been limited though several attempts have been made. A major school, as exemplified by Ravenstein, by Lee, and by Bogue has approached the problem by dealing specifically with migrant characteristics. Differences in age, sex, education, and fertility between non-migrants and migrants, have been used to explain the movements of people.

Ravenstein used data from more than 20 countries to derive a set of “Laws” of migration. His second paper in 1889 contains two “Laws” that relate to this study. In relation to technology he states:

Does migration increase? I believe so. Whenever I was able to make comparisons I found that an increase in the means of locomotion and a development of manufacturing and commerce have led to an increase in migration. (Ravenstein, 1889: 288).

His seventh law opens the area of push and pull factors in migration:

Bad or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to “better” themselves in material respects. (Ravenstein. 1889: 286).

In 1966 Lee attempted to construct a theory of migration in the full meaning of the term. By defining migration very broadly, he derived certain self-evident propositions and deduced some conclusions with regard to the volume of migration, the development of streams and counterstreams and, most important for this paper, the characteristics of migrants. (Lee, 1966: 56-57).

Taking a somewhat different view than Lee, Bogue has argued against the development of a general theory of migration differentials and instead has developed what he calls “generalizations” on migration

(1969). He further suggests that “only one migration differential seems to have systematically withstood the test — that for age” (1959: 504).

Our focus is one aspect of the phenomenon of migration: differences in characteristics of migrants and non-migrants. Is it possible to develop a theory of migration differentials that is applicable anywhere and anytime? Lee suggests it is possible; Bogue denies such a possibility. Education is used as the example to develop a potential middle range theory of migration differentials. Migrants are compared to non-migrants at place of origin and at place of destination. To avoid confusion we will refer to people not migrating from place of origin as stayers; while those at destination who are original residents as natives. The term “selectivity” is used for comparisons of migrants and stayers at place of origin; the term “differential” refers to comparisons between migrants and natives at place of destination.

There are numerous reasons for choosing educational attainment as the characteristic to investigate. It is a completed process among most adults. Another reason is that it can serve as a surrogate for other social characteristics. Education and occupation are highly correlated in most instances as are education and income. Furthermore, education is related to the other basic demographic processes of fertility and mortality. There are of course certain pitfalls in using education cross-culturally. The completion of high school was a meaningful achievement in the United States just a few short decades ago; today, it is experienced by over half the population. But this is not the case in most developing nations, where it remains the achieved “end” of a talented minority. Even in the advanced countries, studies have shown that there is often a qualitative difference between high school and college graduates in whatever dependent variable is being analyzed. Thus, it would seem that in societies where the opportunity to attend college is exceedingly limited, such qualitative differences would become even greater. At the other end of the educational scale, what does educational attainment mean when 70-80 percent of the population is illiterate? Finally, the quality of education should be considered especially between rural- and urban-type areas. Does it contribute to the development of a degree of “innovativeness” on the part of the students; or is it merely traditional in content? Though we will use the term “educational attainment” throughout this paper, it should be clear that it can mean different things at different times and different places.

In comparing migrants to non-migrants, four possibilities emerge regarding differential educational attainment. First, migrants may be educationally inferior to non-migrants at both place of origin and destination. Second, they may be educationally superior at both locations. Third, they may be superior to their stayer counterparts but inferior to native counterparts. Fourth, they may be inferior to those living at place of origin but superior to those living at place of destination. Figure 1 illustrates these four possibilities and provides a convenient reference for later discussion.

Studies that deal directly or indirectly with migration differentials in educational attainment indicate a number of apparently contradictory findings.¹ It is, of course, the case that methodological and conceptual differences contribute to such variations. However, often missing from the interpretation of these divergent findings is a view that takes into consideration temporal and cultural variation.² In considering the latter a pattern emerges from these apparently contradictory findings that suggests a possible approach to a theory.

The level of a society's evolutionary development must be incorporated into any general theory of migration differentials. Despite the theoretical models developed, the evidence on the relationship between migration status and socio-economic characteristics such as education is far from definitive. This suggests that the theories which should explain, on a relatively abstract level, empirical facts, need reformulation to achieve more reliability.

The fourfold framework for classifying the educational attainment of migrants is based on comparisons of migrants with non-migrants both at origin and at destination. If the level of development of the place of origin and of destination differs from one study to the next,

FIGURE 1
Migrants' Educational Status Relative to
Non-Migrants at Place of Origin and Destination

Origin	Destination	
	Lower	Higher
Lower	LL No. 1	LH No. 4
Higher	HL No. 2	HH No. 3

the comparisons of migrants with non-migrants cannot be expected to remain consistent. A systematic description of the way in which places of origin and destination vary in different societies must be incorporated into a theory of migration differentials.³

For one thing, rural- and urban-type areas of origin and destination can lead to varied patterns of differentials. Furthermore, the extent of the technological or industrial level of a society is related to the proportion that is rural or urban. Where the population is 75 percent rural, one can hardly expect that migration will be typically urban-urban. Similarly, in contemporary United States — 75 percent urban — one cannot expect much rural-rural migration. Differences are qualitative as well as quantitative. As Kuznets has pointed out recently,

... the rural populations of the developed countries are far more urban than the urban population of the less-developed countries; and the urban population of the less-developed countries are far more rural than even the rural populations of the developed countries. In other words, rurality and urbanity have different meanings (or consequences) ... in the two groups of countries. (Kuznets, 1974).

Additionally, rural can imply an agricultural way of life, but this is less so in developed areas. Perhaps more important is the change in the meaning of urban. (Macisco, 1970: 539). Urban areas can include some small cities. They also include the vast metropolitan areas of over one million. The migrant from an agricultural place of origin to the metropolitan area — perhaps the primate center of the nation probably differs in many characteristics from the migrant from a rural non-agricultural place of origin to a small city. Yet both classify as rural-urban migrants. Thus the fourfold scheme which illustrates the various migration streams (see Figure 2) while convenient, is limited as to its conclusions.

FIGURE 2
Types of Migration Streams

Origin	Destination	
	Rural	Urban
Rural	RR	RU
Urban	UR	UU

For example rural-rural (streams) mean different things in different types of societies.

Richmond has described three kinds of societies: traditional, industrial, and post-industrial — or to follow the Toennies scheme: *gemeinschaft*, *gesellschaft*, and Richmond's *verbindungschnetschaft*, (1969: 272). In a *gemeinschaft* society, migratory movements will tend to be rural to rural: Such a society will be overwhelmingly agricultural in its economic structure.

The *gesellschaft* society will be industrial rather than agricultural and the migration streams mostly rural-urban, because of the attractiveness of the cities for employment. Others may be "pushed" as a result of the mechanization of agriculture and the overall decline of rural communities.

The post-industrial society is just now developing in the United States. In such a society which Richmond labels "*verbindungschnetschaft*," migration is neither push nor pull, but rather is a two-way process — transilient. It is overwhelmingly inter-urban in character. However, some traditional and industrial aspects remain.

If the boundaries of a society are assumed to correspond with those of a nation state most countries today have sectors participating in the traditional, industrial and post-industrial states of development. Western Europe and North America have the smallest proportion of their populations still at the traditional level, while India and China have the largest, despite the fact that the latter also participate in the industrial and post-industrial phases utilizing atomic power, automation and the most up-to-date methods of electronic communication and jet age transportation. It follows that in reality most countries will exhibit patterns of migration that are characteristic of all three types of society and stages of development. (Richmond, 1969: 278).

With this view of societal change, a review of the findings of selected migration studies relating to educational characteristics follows.⁴ The Latin American studies centered in Lima and Monterrey are typical of case two, i.e., the migrants are better educated than the stayers but less educated than the natives. These are generally rural-urban patterns. Ducoff's work in San Salvador and some recent work in Guatemala City, suggest a bimodal pattern that is selective of both better and less well educated segments of the population. In Bombay, Zachariah arrives at similar conclusions as those for Lima and Monterrey. Migrants to Bombay are better educated than those who

remained at their place of birth but less educated than the general population of Bombay. These and other studies are typical of the rural-urban migration that has been taking place as societies move from a traditional to an industrial way of life.

* In 1960 in San Juan, a city in a country perhaps further along the industrial road than those enumerated above, Macisco and colleagues found that migrants were generally better educated than the natives living in San Juan. The difference increased with the more urbanized places of origin. Among those migrating from non-metropolitan areas to San Juan, the difference was not significant and reversed directions among older persons. The general impression suggests case three (migrants superior to those at both locations).

The United States studies can be taken chronologically to consider the importance of increased industrialization as a factor over time. Most studies summarized by Thomas in 1938 show that migrants were better educated than the stayers but less educated than the natives. Most such studies were concentrated in rural areas and compared rural migrants to either rural stayers or urban natives.

For the period 1935-40, Bogue found that migrants to cities were better educated than those they left behind, but generally less educated than city-dwellers — again an example of case two.

The studies stemming from the 1960 Census suggest that the case three situation is becoming prevalent in the United States. The general conclusions from the works of Bogue, Folger and Nam, and Blau and Duncan is that migrants are better educated than non-migrants at both points. The data from the 1970 Census reinforce this conclusion *a fortiori*. Bouvier and Cahill (1975; Cahill and Bouvier, 1974) have shown that with rare exceptions, inter-divisional migrants are far better educated (as defined by proportion college educated) than stayers or natives.

Although these studies are not strictly comparable, the findings suggest an emerging pattern. If one takes both location and the degree of industrialization into consideration, migration differentials may be understood in the context of societal variations.

To integrate both the types of migration, i.e., rural-urban migration streams etc., and their occurrence in different social systems, i.e., “*gemeinschaft*” etc., with the educational differences that have been noted between migrants and non-migrants, Figure 3 has been con-

structed showing various possibilities. While this is merely an accounting scheme, it provides a framework that may help in the understanding of educational differentials.

Realizing, as Richmond points out, that rural-rural, rural-urban, urban-urban moves can all occur in each type of society (though in different proportions), it is important when generalizing about one type of move to specify its context in a particular type of society. To conclude, for example, that rural-rural moves always result from a “push” phenomenon may lead to the misconception that migrants in traditional societies will always have lower educational attainment than non-migrants. Moves in a traditional society may also be positively selected where a “pioneer” movement results in the better-educated people being “pulled” from the old homeland in search of new territory. With this qualification in mind and limiting oneself to education, the following tentative hypotheses are appropriate.

1. The relative educational quality depends on the type of society and the economic development at both place of origin and destination.
2. The less advanced a society, the more likely migrants will be educationally inferior to non-migrants.
3. The more advanced a society, the more likely migrants will be superior to both stayers and natives.

In comparing migrants to non-migrants in particular locations, places of origin and destination must be analyzed as to their relative socio-economic progress. The above hypotheses should also be applicable

FIGURE 3
Educational Differentials Within Migration Streams
by Stages of Societal Development

Stages of Societal Development	Place of Origin	Place of Destination	
		Rural	Urban
Traditional	Rural	LL No. 1	HL No. 2
	Urban	*	*
Industrial	Rural	*	HL No. 2
	Urban	*	HH No. 3
Post-Industrial	Rural	*	*
	Urban	LH No. 4	HH No. 3

* These types of migration are highly unlikely to occur in most such societies.

to sub-groups within populations in a society. All migrations in a type of society (i.e., traditional, post-industrial) are not the same. There are traditional movements (i.e., rural-rural) within post-industrial societies, but these are relatively rare. Although categories have been defined, they represent something different in various societies. Further, changes in educational attainment form a continuum, not a dichotomy.

Most possibilities can take place in each type of society, though some would be atypical. In the remainder of this paper a few speculations will be offered. In a traditional society, what little migration that takes place would be overwhelmingly rural-rural, emphasizing push factors. Those being pushed from their homes would perhaps be the failures of the community. These migrants will generally be less "educated" (literate) than either the stayers or the natives. This would be especially true of internal migration. Some of the international movements though still predominantly rural-rural might be more of a pioneer nature thus reflecting a different type of educational differential. In these traditional societies, some rural-urban and urban-urban movement would also occur, but would be rare — and perhaps reserved for the professionals, clergy and politicians.

As a society evolves towards industrialization there will be fewer rural-rural movements. The emphasis will be on movements to the urban centers. This will be a pull type of migration and will especially interest those rural dwellers who desire to improve their life situation in a society that is rapidly changing. The demands of this type of society, especially in its early stages, are for unskilled labor to fill the factories emerging throughout the land. The city is perhaps already the home of the relatively sophisticated and increased industrialization demands the in-migration from rural areas of those less educated. But those who decide to move away from the farm are perhaps more innovative and desire to improve their social standing. Thus case two (Figure 1) seems appropriate for most such migrants in an industrial society. However, again there are exceptions. It is in this situation that a bimodal pattern is often discerned. The so-called rural failures may also be lured to the city. The older migrants may well be less educated than their counterparts at either place of origin or destination. Additionally, in the industrial society, the metropolitan center is beginning to emerge. The migrant from the farm to the nation's primate city may

well be more innovative, and better educated than the migrant from the same rural area to the medium-size city nearby. Variations in educational differences can perhaps be explained if these conditions are taken into consideration.

In the post-industrial society still another type of migration emerges. The direction is from one industrial sector to another. Most advanced societies are in a transitional stage directed towards this new society. Generally there is a failure to produce sufficient highly trained manpower to meet the needs of the new era which will be dominated by this technological revolution. In such a society it is reasonable to suggest that these migrants will be better educated than either stayers or natives. These are the elite of the society where "meritocracy" has become the means of social advancement, (Young, 1962). These are the innovators and the best-educated persons in the society. Again, however, there are many exceptions. Rural-urban movements are still to be observed — especially among the more disadvantaged. The metropolitan area becomes ever more luring to both the rural and small city dwellers. In these instances, they may not be the educational elite but rather, more typical of the migrants in an industrial society.

A fourth pattern remains: those less educated than stayers at place of origin but better educated than the natives at place of destination. In any construct typology, a fourth dimension is often difficult to explain, (McKinney, 1957). Perhaps return migrants would fall into such a category. They would often tend to be less educated than those where they originally moved to but are now returning from. However, they would be better educated than their former colleagues whom they are now rejoining. They might well be those original rural-urban migrants who did not succeed and are returning home. The exceptions to the case three situation noted in 1970 for the US by Cahill and Bouvier (1974) may reflect such a phenomenon. That is, those moving from the Pacific to the East and West South central divisions (overwhelmingly return) were less educated than those at the place of origin but better educated than those at the place of destination.

There are other possibilities. The move of the very rich to exurbia is an urban-rural pattern. There has been some sentiment for a "return to nature" on the part of many young people in recent years. This too represents the urban-rural pattern — again perhaps among the better educated. Is it possible that improvements in technology and commu-

nications will make it possible for members of a future society to return to a "neo-cottage industry" where work could be done through computers and people could conceivably move to the rural areas while remaining "urbane?" This pattern, while not predominant in any society, does give some indication of occurring ever more often in the United States. What general form it will eventually take is difficult to determine at the present time.

Concluding with the words of Vance: "The closer one sticks to his data, the less vulnerable are his generalizations and oftentimes the less important. A loose thought system sacrifices accuracy for the sake of generalization." In this paper, numerous generalizations are subject to valid criticism and it should be emphasized that this is a purely *heuristic* exercise. But the mere enumeration of empirical findings are less than useful in the setting of contributions to increased knowledge about migration differentials in general. It is preferable to have some generalizations rejected and a possible theoretical framework developed than to succeed in completing an empirically valid description of an isolated occurrence in a small part of the world — a description that is beyond contradiction but empty of any possible abstractions. Only when such studies are analyzed on a broad conceptual framework — cross culturally and over time — do they contribute to the development of broader conclusions and, eventually, theories.

NOTES

¹ See: Blau and Duncan, 1967; Bogue, Hagood, and Bowler, 1957; Bogue, Shryock, and Hoermann, 1953; Browning and Feindt, 1969; Ducoff, 1962; Elizaga, 1966; Folger and Nam, 1967; Kiser, 1932; Leybourne, 1937; Macisco, Bouvier, and Renzi, 1969; McCormick, 1933; Price, 1965; Raper, 1936; Shryock and Eldridge, 1947; Shryock and Nam, 1965; Thomas, 1938; Zachariah, 1966.

² For examples of models that do consider temporal and cultural variation, see Peterson (1975: 317-327); Zelinsky (1970).

³ For another classification typology of places of origin and destination see Balan (1969).

⁴ A more detailed summary of relevant migration studies may be found in Zarate and Zarate (1975).

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II METHODS

SEARCHING FOR A DESCRIPTION OF NET INTERNAL MIGRATION AMONG COUNTIES OF ONTARIO

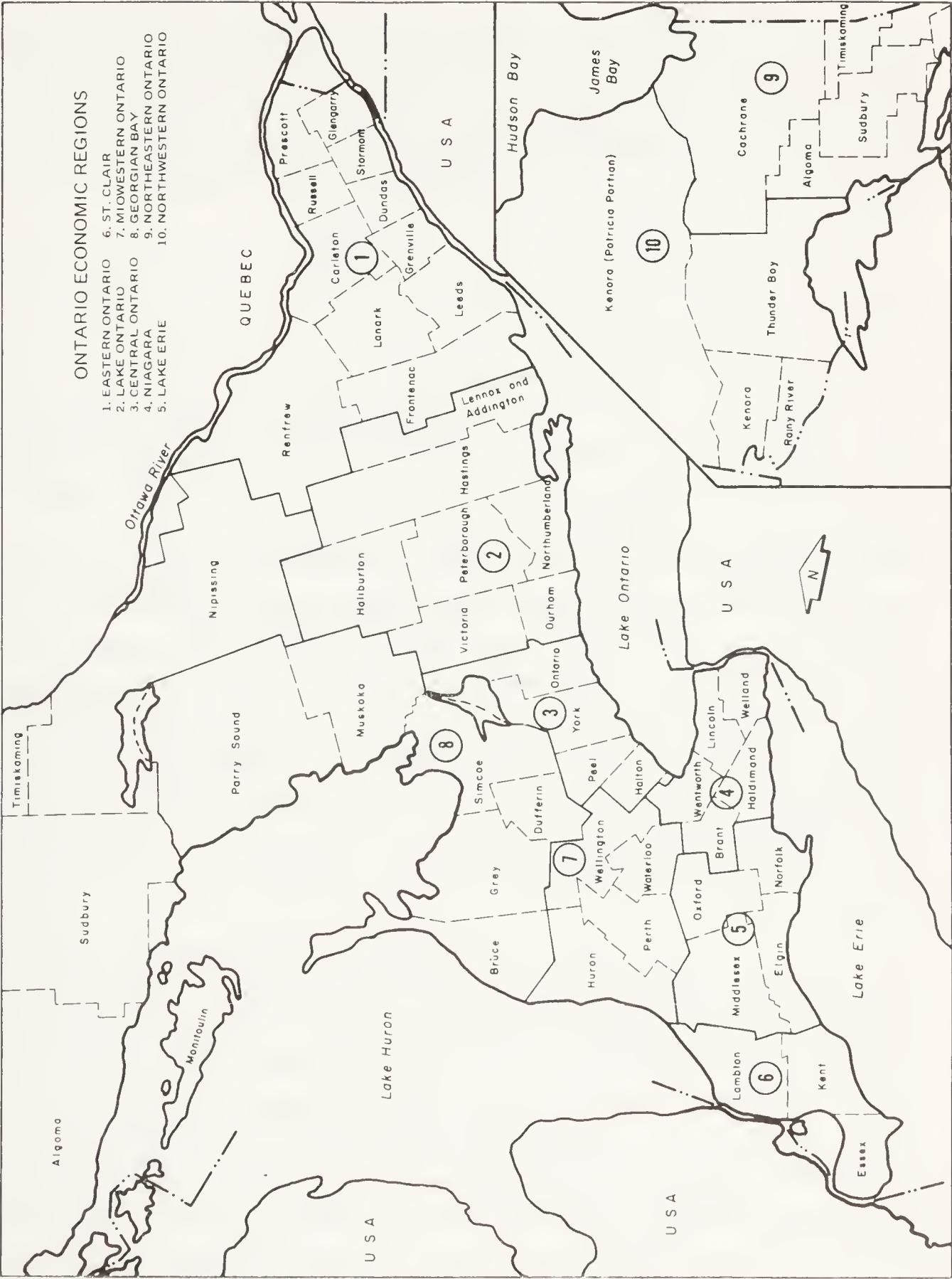
Betty Macleod, assisted by G S Shakeel
and R G Wolfe

INTRODUCTION

This paper reports upon the migration aspects of a research project 'The Development of Improved Bases for Forecasting School Age Population in Ontario' which has the aim of improving population projections for educational planning purposes in Ontario, one of the major provinces of Canada.

Most existing projections for Ontario population employ an analytical model which extrapolates future levels of population from the historical trends of the demographic components for the province as a whole. Estimates are made for age-specific fertility and mortality, and migration is accommodated by assuming a number of alternative levels of immigration into Canada, and computing estimates of the percentage of that immigration and the amount of interprovincial migration which is likely to find its way into Ontario on a net basis. The most recent set of population projections for Canada and the provinces derives its

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ONTARIO ECONOMIC REGIONS, SHOWING COUNTY GROUPINGS

estimates for interprovincial migration from movements reported for family allowance data (Statistics Canada, 1974: 48-55; Perreault and Gnanasekaran, 1973). Projection of population for a particular part of the province is then based upon the existing proportion of the provincial population presently located in the area, particularly for the allocation of the migration component of growth.

Population projections generated in this manner are useful for many purposes, but they are not sufficiently sensitive to the influence of differential strengths within the province to be of optimal use to educational planners. As Gerald Hodge and Jacques D. Paris showed in a paper prepared in 1969 (Hodge and Paris, 1970), accommodating the relative differences between migration and natural increase as sources for population growth among the regions of Ontario may suggest radically different patterns of growth throughout the province than those inferred from the sets of projections developed by the Ontario Ministry of Treasury, Economics and Intergovernmental Affairs. In the historical context, the results obtained by the Hodge-Paris approach, which was based on a shift-share analysis of structural and regional growth components, appeared to approximate the actual patterns of growth throughout Ontario more closely than the government projections for population had done. The reason would seem to be that the population estimates produced at government level had not taken prevailing patterns of migration within the province sufficiently into account.

Since for purposes of educational planning, the allocation of educational resources needs to be accomplished as much in relation to the distribution of population as to its total, the regional component is important in itself. Therefore, for our particular needs in the educational sphere, it makes sense to project population on the basis of county and regional trends respecting the three components of demographic change, and to derive total population for the province by summing the parts. The projections which are being generated within our project have this aim in view. The units for which projections are being made are those shown in the map. There are 43 counties and 11 districts (sparsely populated areas administered by the provincial government) throughout Ontario, which were grouped for

the purposes of our work into 10 economic regions according to definitions recognized by the provincial government (as indicated on the map (based upon Camu, Sametz and Weeks, 1964). The area for the whole province involves a land mass of 344,092 square miles and there is a population of 7.8 million inhabitants.

ONTARIO PROJECTIONS FROM A COUNTY BASE

A first step was to evaluate the existing levels of demographic parameters and to assess regional differences in population patterns. For this purpose, the findings of an earlier study on Ontario population were updated to 1971, and age-specific rates were calculated for the counties and districts of Ontario with respect to fertility, mortality and migration (Macleod, Ivison and Bidani, 1972). Data on fertility and mortality were available from the Ontario annual registry of vital statistics, and population data were at hand from the 1971 census, so that construction of rates for these two demographic components was not difficult. However, preparation of estimates and rates for migration presented a somewhat greater problem.

Unlike some of the countries in Europe, except for records of international immigrants, there is no registry of migration kept in Canada, or in Ontario. This means that estimates of internal migration, unless they can be excerpted from the files of utility companies, records kept by welfare and insurance agencies, assessment rolls, family allowance payments, and other incomplete sets of data which are often sporadically maintained and are sometimes of unreliable calibre, must be computed indirectly from census data. Since censuses in Canada are five years apart, such estimates are necessarily made with respect to net migration over a five-year period, rather than records of in or out movements or of gross year-to-year movements for an area.

When estimates of net migration have to be made using census materials as a base, such estimates are usually obtained by a residual method. That is, by aging population of a given age at the beginning of the period by an appropriate multiplier, we can estimate how many persons should be alive at the end of the period. Comparison of that number with persons actually recorded of succeeding age at the end of the period indicates the approximate number of persons who have moved in or out over the period. (That is, of course, a net concept which may not include non-stayers or multiple movers and which does not discern deaths of out-migrants and deaths of in-migrants in the migration estimate.) Census survival ratios, place-of-birth survival ratios or life-table survival ratios are all appropriate multipliers for aging the population. Life-table survival ratios are the easiest to calculate, although they may yield less accurate results than the other two methods (George, 1970; Hamilton, 1967; Hamilton and Henderson, 1944). Since life tables for the 10 regions were at hand, we used survival ratios from that source to age the population in our preliminary projections, with the thought that census survival ratios might be tested at a later stage of the work. Accordingly, estimates of net migration for groups of population aged five and over, by sex, were made with respect to all the counties throughout Ontario for the intercensal intervals 1956-61, 1961-66, and 1966-71. The levels of migration thus obtained were converted into rates by relating net migration for each sex and age group over the interval to the population of corresponding sex and age at the beginning of the period.

Once the levels of existing rates for all three demographic components had been established for the various counties and regions of the province, the next step involved projecting these rates.

The projection of mortality yielded the least difficulty, since change is ordinarily of a gradual sort. For our preliminary projection we decided to use the age-sex specific levels of mortality in 1971, on the grounds that levels of mortality were already very low in Ontario and extensions of life seemed to occur primarily in the upper age groups where they would have a minimum effect on the overall expectation of life (Coale, 1957: 83-89).

The analysis of regional trends in fertility indicated that the decline

in age-specific fertility which had been evident as a general phenomenon in Ontario throughout the 1960's was continuing, and that age-specific rates were becoming more homogeneous throughout the province. By 1971 the rates had fallen by about 20 percent from 1966 levels, so that the average woman passing through the childbearing years might be expected to bear 2.2 children, which is a little above replacement level over a generation. Projection of the fertility component was considered possible by three methods: (1) projection of the trends in age-specific fertility rates by county throughout the period 1956-61, 1961-66, and 1966-71; (2) use of the 1971 age-specific fertility rates for counties on the assumption that fertility was likely to continue at about the same level as in 1971; (3) projection of the age-specific fertility rates by county through curve-fitting procedures such as those employed by E. M. Murphy and D. G. Nagnur (1971) for the Canadian fertility data generally. While the third method was considered worthy of investigation, we decided to postpone experimentation of that sort until a later stage of the study. The first method required more detailed information about fertility trends than was currently at hand, although data would be forthcoming at a later stage of our research project. Consequently, as an interim measure, we decided to project fertility for the preliminary population projections by the second method, i.e. using the 1971 age-specific fertility rates as input, with the idea of introducing more refined assumptions respecting fertility when generating the final population projections for the project.

Again, it was the migration component which presented the most difficulty. Diversity in size and direction of migration streams appeared to be the most noticeable characteristics of migration patterns at the intraprovincial level. This posed the problem: how could we possibly generate a descriptor for net migration which could accommodate these many anomalies and yet make an allowance for the obvious differences in size of migration streams and variations in direction of migration with respect to different age groups and individual counties?

INTRAPROVINCIAL MIGRATION IN ONTARIO OVER THE PERIOD 1966-71

Our estimates of net migration for the province as a whole indicated that there was a net gain of about 330,000 persons in 1966-71, representing an increase of about 125,000 persons over estimated net migration for the period 1961-66.

The rise in the general level of migration was reflected in county patterns. Counties which had received large streams of migration (9,000 or more net migrants) in 1961-66 generally received even more migrants on a net basis in 1966-71; exceptions to this were Ontario, Waterloo and York counties where net in-migration, although still in the large stream category, subsided somewhat. Wentworth County, which had been in the large stream group in 1961-66, had a negative movement in 1966-71, probably due to a boundary change which removed part of the population of Burlington from its jurisdiction. Areas such as Simcoe and Sudbury which had received substantial in-migration in earlier census periods — 1951-56 and 1956-61 — and suffered net out-migration in 1961-66, again experienced substantial net in-migration in 1966-71. In sum, there appeared to be a tendency to generally reverse or modify net out-migration respecting areas which had earlier histories of migration gain followed by population loss through out-migration in 1961-66. Thunder Bay seemed to be the only county where the outward drain was maintained at about the same level as in 1961-66; Leeds, where net out-migration doubled, was a distinct exception to trend.

Other areas which had a general record of net out-migration since 1951 or 1956 continued to experience the same direction of movement, on balance, but migration out of these areas tended to decline. The counties of Region 8 — Bruce, Grey, Dufferin, Simcoe, Muskoka and Parry Sound — were exceptions to trend, showing sharp increases in net in-migration and, in some cases, distinct reversal of net out-migration.

Regional migration patterns probably reflected industrial activity and urbanization. In Region 1, where population grew by almost

72,000, the focus of in-migration was Ottawa-Carleton (location of the national capital); migration into adjacent Russell county helped to offset decline in the population growth of that county. Other counties in the region lost population through migration. Region 2, along the northern shores of Lake Ontario, generally gained from migration, with the exception of Prince Edward county, an island in Lake Ontario. However, overall population growth for the region was only about 24,000 persons over 1966-71. In both Regions 1 and 2, migration contributed a little above 40 percent of the population growth during 1966-71.

Region 3 continued to be the fastest growing part of Ontario, with an overall growth of population of about 385,000 for the 1966-71 period. York-Toronto grew by 234,000; Peel increased population by 87,000; Halton by almost 39,000; and Ontario county by 25,000. Migration contributed almost 65 percent of the growth in Halton, about 50 percent in Ontario and roughly 53 percent in York-Toronto, and almost three-quarters of the population expansion in Peel. Region 4 grew slowly, increasing its population by about 40,000 with migration contributing about 17 percent. Region 5 grew by roughly 45,000. Migration to the counties of Region 5, especially to Middlesex, explained a little more than half of the population growth. Region 6 had a less substantial increase in population — 36,000 — about 29 percent the result of migration. In Region 6, only Essex received additions to population through migration; other counties had migration losses. In-migration to Region 7, contributing 49 percent of a population growth of 53,000 persons, was concentrated on Waterloo and Wellington counties, with Perth and Huron experiencing out-migration.

Region 8 revealed an interesting change from earlier trends, with its counties all receiving in-migration in 1966-71 which accounted for 67 percent of a population growth of roughly 41,000 persons. Migration was particularly important as a factor in population growth in the Muskoka district where it provided 83 percent of the increase. Regions 9 and 10, except for Sudbury, were areas of low in-migration or of out-migration. Migration into Sudbury accounted for 39 percent of the population growth of that county. This contrasted sharply with the situation respecting Cochrane in Region 9, where there was the largest

net outward movement from any area in the province, and Thunder Bay in Region 10 which had the second largest net out-migration.

How could we draw order from the wide variation of patterns of migration reflected in these movements? A first step appeared to be to group the movements according to gain or loss over the longer run period. Using data for earlier census intervals which had been computed for *Patterns and Trends in Ontario Population* (Macleod, 1972: V) the counties were listed as in Table 1, columns 1 and 4. Other columns which indicate the rate of population growth and the years to double population were generated in response to another aspect of the problem of migration projections, described below.

THE PROJECTION OF MIGRATION

Having rejected the usual solution of assuming various alternative levels of immigration, and then allowing for the province's expected portion of the net movement throughout its counties, we searched for alternative methods which might be employed for projecting net migration at the county level.

One possibility would have been to project net migration as a ratio of natural increase, an assumption which had been employed by a firm of consultants who generated projections of population for Canada to the year 2000 (Systems, 1970), but our investigations into the relationship between migration and natural increase at the county level throughout Ontario suggested that the two demographic phenomena sometimes go in opposite rather than similar directions. Table 2 shows our estimates for net migration as a percentage of total population growth for the counties of Ontario over the period 1966-71.

Another possibility was to project migration rates for the period 1966-71, similar to the projection we had undertaken for fertility and mortality, except that in the case of migration the rate would apply over the five-year period and would be based on the population in 1966, at the beginning of the period. A difficulty with this method

(Text continued on page 51)

TABLE 1
Distribution of Counties in Ontario by Patterns of Net Migration, Rate of Population
Growth and Years to Double Population

(1) Pattern of Net Migration	(2) Rate of Population Growth	(3) Years to Double Population	(4) County Allocation by Migration Pattern and Growth Rate	
			No. of Counties	Name
1. Gain in all four periods 1951-56, 1956-61, 1961-66, and 1966-71	R : Rapid MR : Medium - Rapid M : Medium	<10 10-20 20-39	2 4 6	Halton, Peel Niagara, Ontario, Waterloo, York Durham, Middlesex, Northumberland, Ottawa-Carleton; Peterborough, Wellington
	SM : Slow-Medium S : Slow	40-69 70+	3 0	Dufferin, Lennox-Addington, Oxford -- -- --
2. Gain in first three periods: 1951-56, 1956-61, and 1961-66, and loss in fourth period: 1966-71	MR : Medium - Rapid M : Medium	10-20 20-39	1 1	Wentworth Frontenac
3. Gain in first two periods: 1951-56 and 1956-61 and loss in the last two periods: 1961-66 and 1966-71	M : Medium SM : Slow-Medium S : Slow	20-39 40-69 70+	3 2 1	Lambton, Renfrew, Thunder Bay Grenville, Leeds Lanark
4. Gain in first period: 1951-56 and loss in the remaining three periods: 1956-61, 1961-66, and 1966-71	M : Medium SM : Slow-Medium S : Slow	20-39 40-69 70+	1 2 2	Kenora Rainy River, Stormont Dundas, Prince Edward
5. Loss in all four periods: 1951-56, 1956-61, 1961-66, and 1966-71	S : Slow	70+	6	Cochrane, Glengary, Huron, Manitoulin, Perth, Prescott

TABLE 1 (Continued)

(1) Pattern of Net Migration	(2) Rate of Population Growth	(3) Years to Double Population	(4) County Allocation by Migration Pattern and Growth Rate	
			No. of Counties	Name
6. Loss in first three periods: 1951-56, 1956-61 and 1961-66, and gain in the fourth period 1966-71	SM : Slow-Medium	40-69 70+	1 5	Russell Bruce, Grey, Muskoka, Parry Sound, Timiskaming
8. Loss in first period: 1951-56, and gain in the remaining three periods: 1956-61, 1961-66, and 1966-71	SM : Slow-Medium S : Slow	40-69 70+	2 1	Brant, Haldimand Victoria
9. Loss in first and third periods: 1951-56 and 1961-66, and gain in second and fourth periods: 1956-61 and 1966-71	SM : Slow-Medium S : Slow	40-69 70+	1 1	Norfolk Hallburton
11. Gain in first two and the fourth periods: 1951-56, 1956-61 and 1966-71 and loss in the third period: 1961-66	MR : Medium-Rapid M : Medium SM : Slow-Medium S : Slow	10-20 20-39 40-69 70+	1 3 1 1	Algoma Nipissing, Simcoe, Sudbury Hastings Elgin
12. Gain in first and last two periods: 1951-56, 1961-66 and 1966-71 and loss in the second period: 1956-61	SM : Slow-Medium	40-69,	1	Essex
13. Loss in first two and the fourth periods: 1951-56, 1956-61 and 1966-71 and gain in the third period: 1961-66	SM : Slow-Medium	40-69	1	Kent

TABLE 2
Net Migration as a Percentage of County and
Regional Growth, 1966-71

Area	Change in Population 1966-71	Estimated ⁶ Net Migration	% Net Migration of Population Change
<i>Region 1:</i>	71,602	25,376	35.4
Carleton ¹	64,467	33,198	51.5
Dundas	349	-635	-181.9
Frontenac	4,557	-688	-15.1
Glengarry	299	-392	-131.1
Grenville	886	-119	-13.9
Lanark	1,048	-309	-29.5
Leeds	966	-1,117	-115.6
Prescott	675	-633	-93.8
Renfrew	1,422	-3,424	-240.8
Russell ²	-4,817	426	-8.8
Stormont	1,750	-931	-53.2
<i>Region 2:</i>	24,267	8,293	34.2
Durham	2,941	1,478	50.3
Haliburton	1,312	1,046	79.7
Hastings	5,268	249	4.7
Lennox & Addington	3,158	1,569	49.7
Northumberland	3,086	1,284	41.6
Peterborough	5,846	1,786	30.5
Prince Edward	-667	-1,327	198.9
Victoria	3,323	2,208	66.4
<i>Region 3:</i>	396,247	215,291	54.3
Halton ³	49,670	24,614	49.5
Ontario	25,437	12,168	47.8
Peel	87,079	63,918	73.4
York)	234,061	114,591	49.0
Toronto)			
<i>Region 4:</i>	40,469	4,274	10.6
Brant	5,825	1,156	19.8
Haldimand	2,655	1,020	38.4
Niagara ⁴	24,408	3,610	14.8
Wentworth ⁵	7,581	-1,512	-19.9

Table 2 (Continued)

Area	Change in Population 1966-71	Estimated ⁶ Net Migration	% Net Migration of Population Change
<i>Region 5:</i>	45,164	20,461	45.3
Elgin	4,698	1,838	39.1
Middlesex	32,612	17,301	53.1
Norfolk	3,522	852	24.2
Oxford	4,332	470	10.8
<i>Region 6:</i>	36,271	7,207	19.9
Essex	25,478	7,713	30.3
Kent	4,714	-290	-6.1
Lambton	6,079	-216	-3.6
<i>Region 7:</i>	52,775	22,796	43.0
Huron	-1,491	-3,880	260.2
Perth	2,551	-364	-14.3
Waterloo	37,312	18,710	50.1
Wellington	14,403	8,240	52.2
<i>Region 8:</i>	40,667	25,452	62.6
Bruce	4,300	2,602	60.5
Dufferin	4,092	2,918	71.3
Grey	3,813	1,568	41.1
Muskoka	4,249	3,349	78.8
Parry Sound	1,910	902	47.2
Simcoe	22,303	14,113	63.3
<i>Region 9:</i>	35,902	1,088	3.0
Algoma	8,374	27	0.3
Cochrane	-1,499	-8,263	551.2
Manitoulin	386	-79	-20.5
Nipissing	5,332	801	15.0
Sudbury	23,978	8,527	35.6
Timiskaming	-669	75	-11.2
<i>Region 10:</i>	886	-7,461	-842.1
Kenora	-765	-291	38.0
Rainy River	-66	-1,658	2512.1
Thunder Bay	1,717	-5,512	-321.0
Ontario	742,235	322,687	43.5

Source: 1966 and 1971 Censuses of Canada.

is that one should probably not assume that migration will expand according to some set proportion of the population base of a county, because other influences also contribute to the size and direction of migratory movements. What is needed is a predictor for migration which will provide for a reciprocal interaction between migration and the size and composition of a county's population, the conditions of growth in that county arising out of its resource base, the state of the local economy, the transportation and communication network in which the county is located, and other regional conditions.

We decided to experiment with the projection of past rates for age-sex specific migration by curves other than linear formulations, using straight-line projections only where they were obviously most appropriate. It seemed that such an approach might implicitly provide for the interaction which we wished to accommodate between migration and projected population levels, as well as between migration and other influences which were endogenous to economic growth and development at the county level. The curves tested were: (1) straight line or linear; (2) parabolic, and (3) Gompertz. The mathematical statements of these functions are as follows:

Notes to Table 2.

1. Changed to Ottawa-Carleton in 1971. Does not include the population of Cumberland township in 1966.
2. Includes the population of Cumberland township in 1966, but not in 1971.
3. Excludes part of the population of Burlington in 1966, includes it in 1971.
4. Previously Lincoln and Welland counties.
5. Part of the population of Burlington is included in 1966 but is excluded in 1971.
6. Estimated by the life table survival ratio method.

Method 1: Linear

Formula: $Y = a + bx$

where:

$$Y_3 - Y_1 = \frac{Y_2 - Y_1}{X_2 - X_1} (X_3 - X_1)$$

Y_0 = 1961 net migration by age

$$= \frac{Y_2 - Y_1}{1} \quad (2)$$

Y_1 = 1966 net migration by age

Y_2 = 1971 net migration by age

$$= 2Y_2 - 2Y_1$$

Y_3 = 1976 estimated net migration by age

$$Y_3 = 2Y_2 - Y_1$$

Note: In using this function, only the two most recent points in time were used to estimate the third point, i.e. net migration for 1966 and 1971.

Method 2: Parabolic

Formula: $Y = ax^2 + bx + c$

where:

$$\begin{aligned} Y_{-1} &= a(-1)^2 + b(-1) + c \\ &= a - b + c \end{aligned}$$

Y_{-1} = 1961 net migration by age;
 X_{-1} : 1961

$$Y_0 = a + b + c$$

Y_0 = 1966 net migration by age;
 X_0 : 1966

$$Y_1 = a + \frac{1}{3}b + \frac{5}{3}c$$

Y_1 = 1971 net migration by age;
 X_1 : 1971

$$Y_2 = 3c - 3b + a$$

Y_2 = 1976 estimated net migration by age;
 X_2 : 1976

or

$$= 3Y_1 - 3Y_0 + Y_{-1}$$

Method 3: Gompertz function

Formula: $Y = KG^{B^X}$ (1)

Taking logarithms of both sides of (1)

$\log Y_3 = \log K + B^3 \cdot \log G$

$$= \left[\begin{array}{c} \log Y_1 \\ \log Y_0 - \frac{\log \frac{Y_1}{Y_0}}{\log \frac{Y_2}{Y_1} - 1} \\ \frac{\log \frac{Y_1}{Y_0}}{\log \frac{Y_2}{Y_1} - 1} \end{array} \right] + \left[\begin{array}{c} \log^3 \frac{Y_2}{Y_1} \\ \log^3 \frac{Y_1}{Y_0} \end{array} \right] \bullet \left[\begin{array}{c} \log \frac{Y_1}{Y_0} \\ \log \frac{Y_2}{Y_1} - 1 \\ \log \frac{Y_1}{Y_0} \end{array} \right]$$

$= \log Y_2 + \frac{\log^2 \frac{Y_2}{Y_1}}{\log \frac{Y_1}{Y_0}}$

where:
Y₀ = 1961 net migration by age
Y₁ = 1966 net migration by age
Y₂ = 1971 net migration by age
Y₃ = 1976 estimated net migration by age.

$Y_3 = e^{\log Y_2 + \frac{\log^2 \frac{Y_2}{Y_1}}{\log \frac{Y_1}{Y_0}}}$

Gompertz 1: Selected points

$\log Y_3 = \frac{\log^2 \frac{Y_2}{Y_1}}{\log \frac{Y_1}{Y_0}} + \log Y_2$

If Y₀, Y₁, Y₂ have the same sign

Gompertz 2: Cumulative points

$$\log Y_3 = \left[\frac{\log Y_0 + Y_1 + Y_2}{Y_0 + Y_1} \right]^2 + \frac{\log Y_0 + Y_1}{Y_1} + \log Y_0 + Y_1 + Y_2 / - (Y_0 + Y_1 + Y_2)$$

If Y_0 , $Y_0 + Y_1$, $Y_0 + Y_1 + Y_2$ have the same sign.

The result was 20 types of curves which were fitted to the estimates of net migration for each sex and age group over five years of age, for each of the counties and districts of Ontario. On the basis of the patterns of migration in 1956-61, 1961-66, 1966-71, as well as the rate of population growth as indicated by the number of years required to double population (see Table 1), plus an unavoidable element of subjective judgement, we selected an appropriate curve for projecting 1971-76 net migration for each sex-age group over five years of age, and for each county. However, since not a single curve was found to be appropriate for all the age groups in any county, the method which we were attempting to develop was undoubtedly too complex for successful implementation in its existing format.

In the hope that it might be possible to develop a single mathematical predictor, respecting each age-sex group and each county, which would be sensitive to variations in the absolute amount and direction of net migration and that might reflect the characteristics of the migration patterns which we had analyzed, we consulted Richard Wolfe, Project Director in the Computer Applications Department at the Ontario Institute for Studies in Education. He generated the following mathematical function:

$$X \cong X^* = AF$$

The matrix of log migration ratio, X , which has one row for each sex and year for each county, and one column for each age group, is smoothed by approximating it with the least-squares best rank 3

TABLE 3
Population Projections for Ontario

	Macleod-Shakeel			Ministry of Treasury Economics and Inter- governmental Affairs		Statistics Canada
	(1A)	(1B)	(1C)	(2A)	(2B)	(3)
1971	7,703,125	7,703,125	7,703,125	7,703,105	7,703,106	7,703.1
1976	8,515,420	8,526,804	8,096,610	8,180,100	8,333,161	8,370.1
1981	9,521,312	9,555,867	8,517,305	9,111,885	9,027,306	9,187.7
1986	10,676,877	10,802,961	8,944,790	9,853,683	9,752,536	10,073.6
1991	11,880,722	—	9,335,601	—	10,444,754	10,926.5
1996	13,069,782	—	9,666,955	—	11,067,787	11,723.4
2001	—	—	9,965,267	—	11,646,140	12,518.1

Assumptions:

- (1A): Age-specific mortality and age-specific fertility at 1971 levels for counties; net migration by age and sex for counties at 1966-71 level.
- (1B): Age-specific mortality and age-specific fertility at 1971 levels for counties; net migration by age and sex for counties as determined by curve-fitting procedures described in the text.
- (1C): Age-specific mortality and age-specific fertility at 1971 levels for counties; no migration.
- (2A): Age-specific fertility for province declining from total fertility rate of 2,219 in 1971 to 2,105 in 1986; age-specific mortality declining at rates of about 2% for infants, less than 1% for all ages 1-60 and about 2% for persons over 60; migration based on assumption of 60,000 net migrants to Ontario per year.
- (2B): Assumption of medium fertility; same mortality assumptions as in (2A); migration based on assumption of 50,000 net external migration per annum and internal migration at 0.27 percent of Ontario population.
- (3) Projection B assumptions imply levels of fertility below 2.20 for Ontario by 1985; mortality decline below 1% after 1971; and migration based on an assumption of 25,435 net immigrants to Ontario per year, related to an assumption of 59,442 net immigrants to Canada per year.

Sources: (1A) (1B) and (1C) are unpublished preliminary projections generated by Betty Macleod and G. Sabir Shakeel for the project "The Development of Improved Bases for Forecasting School Age Population in Ontario", The Ontario Institute for Studies in Education.

matrix, X^* , as explained in the Appendix. In turn, X^* is the product of a 318×3 score matrix, A , and a 3×14 pattern conversion matrix, F . The scores in A provide simple summary values for each migration ratio set and are extrapolated to estimated scores for successive time points. Then the same conversion matrix, F , is applied to obtain new estimated log migration ratios and these are converted to net migration.

The formula is based upon the accuracy of fit of the various curves to particular sex and age groups across all counties of Ontario. It yields an estimate of net migration by age and sex for all groups over 5 years of age and across all counties, and reduces the need to make subjective estimates of best fit through its built-in measure of that characteristic. Since the equation is incorporated into the program for the population projection, the computer automatically selects the appropriate levels of net migration for the various sex and age groups in the counties across the province.

ASSESSMENT AND EVALUATION

The results of the preliminary projections are shown in Table 3. Column 1A presents the estimates based upon the assumption by counties of 1971 age-specific fertility and mortality and a rate of migration based upon the period 1966-71; column 1B shows the results of using the same fertility and mortality assumptions but of projecting migration by the curve-fitting procedures described above; and column 1C

Sources for Table 3 (Continued):

(2A) *Ministry of Treasury, Economics & Intergovernmental Affairs, Ontario Short-Term Population Projections 1971-1986. (Toronto: Ministry of Treasury, Economics & Intergovernmental Affairs, Demographic Studies Section, January, 1973), pp. 15, 20, 25.*

(2B) *Ministry of Treasury, Economics & Intergovernmental Affairs, Ontario Statistical Review 1973. (Toronto: Ministry, 1973), p. 25.*

(3) *Statistics Canada, Population projections for Canada and the provinces 1972-2001, p. 61, 128, 131.*

shows the effect of projecting the same fertility and mortality assumptions, with no migration taking place (1C, consequently, shows the expected population by county—and, by summing across the province, for Ontario as a whole—as a result of natural increase alone). Two projections produced by the provincial government are set forth in columns 2A and 2B and the most recent projection for Ontario from Statistics Canada (the most probable outcome, in the view of the authors of this paper, from one of a series based on different assumptions) is given in column 3.

Comparing these various sets of projections beyond the year 1986 is difficult because some values have been omitted for later years in some of the series. Probably the period 1976 to 1986 is the best basis for comparison in any event, since projections almost inevitably need to have their assumptions reconsidered and their programs rerun, within a period of 10 to 15 years.

Among the projection series, our series 1C was the lowest throughout for all years. This was to be expected, since it makes no allowance for migration. Series 1C assumes levels of fertility that are somewhat higher than for 2A, 2B and 3, and levels of mortality that are minimally above those that are built into the government projections (see the assumptions for all the series, as summarized in the lower half of Table 3). For the sake of comparing the proportionate growth attributed to migration by each of the series, the estimated natural increase shown for series 1C was subtracted from the intercensal population growth estimates. The resulting estimates for intercensal migration are shown in Table 4, along with calculations of the percentage of intercensal population growth which they represent. Bearing in mind that the allowance for natural increase, according to series 1C, is on the high side, the findings suggest that in terms of historical experience, the provincial government estimates may be low for the early years of the projection, and that our series 1A and 1B, as well as the series produced by Statistics Canada, may be high for the more distant years.

Indeed, our series 1A and 1B both appear to be on the high side, with 1B, the series which was hoped to be an improvement, projecting a rate of population growth even higher than for 1A. The difficulty

TABLE 4
Implied Intercensal Population Growth Due to Migration,
Assuming Natural Increase at Levels Stated in Series 1C

	(1A)	(1B)	(1C)	(2A)	(2B)	(3)
1971-76	418,810	430,194	—	83,510	236,570	273,515
% of Pop. Growth	51.6	52.2		17.5	37.5	41.0
1976-81	585,197	1,038,562	—	511,090	273,450	396,905
% of Pop. Growth	58.2	100.9		58.4	39.4	48.5
1981-86	728,080	1,858,171	—	314,313	297,745	458,415
% of Pop. Growth	63.0	149.0		42.4	41.1	51.7
1986-91	813,034	—	—	—	301,407	462,089
% of Pop. Growth	67.5				43.5	54.2
1991-96	857,706	—	—	—	291,679	465,546
% of Pop. Growth	72.1				46.8	58.4
1996-2001	—	—	—	—	280,041	496,388
% of Pop. Growth					48.4	62.5

Source: Table 3.

appears to arise out of the failure of the curve-fitting procedures to establish a levelling-off point for future years. We had posited no limit to growth, and unless the curve-fitting procedures select a formula which specifies a turn-about point (as with a parabola), the results imply exponential growth. When this occurs, the resulting projection is not acceptable; it must either be scrapped as unrealistic, or limits to growth must be introduced. For the purposes of our research, we are fortunate in having target populations which have been established by the Government of Ontario for the areas of the province expected to achieve most rapid growth during the next 20 years. By writing

these targets into the projection program, and assuming that growth will not be permitted beyond those levels, we hope to make the migration implications of the projection more acceptable.

In addition, the gains attributed to natural increase in our series 1A, 1B, and 1C are probably too high because total fertility rates are likely to fall below the level of 2.2 built into our present assumptions, and mortality levels are likely to fall slightly for certain age groups even though, for most ages, they were already at the best levels of industrially advanced countries in 1971. Accordingly, present plans are to rewrite the program to include improved assumptions about the trends for age-specific fertility and age-specific mortality. The revised assumptions are that age-specific fertility for ages 15-19 will have fallen by 1986 to the level of the lowest figure for any county in 1971; that fertility for ages 20-29 will remain constant at the average regional value in 1971; that fertility for ages 30-44 will assume the lowest value recorded for age-specific fertility in those ages for any county in the province in 1971; that there will be virtually no fertility for age groups 45-49 by 1986. These assumptions imply a total fertility rate of 1.9 by 1986.

Age-specific mortality is expected to decrease at an average rate of 2.25 percent per annum, with heavier weighting for decreases in infant mortality and for ages 60 and over throughout the period. Writing these assumptions into the program, in lieu of the present assumption of age-specific mortality continuing at 1971 levels, will infer a lengthening expectation of life and will tend to raise the levels of the projections very slightly.

Since, on balance, the planned adjustments to the projection program have a downward impact, the overall level of the projections for future years will be lowered.

CONCLUSIONS

In trying to generate a descriptor for net migration which will relate not only to population levels but also to growth conditions at the small area level, we are participating in a preoccupation which has

consumed the time and efforts of demographers and statisticians for decades, if not for centuries. Certainly the search for meaningful generalizations respecting the components of demographic change is not new. We can cite the early attempt of John Graunt to establish a law of mortality, the efforts of Halley, de Moivre, Gompertz, Makeham and others to generate the life table, and the work of Tait, Charles Ansell Jr., Barclay, Kermack and others in the 19th and 20th centuries to describe laws of fertility (Glass, 1966). More recently, scholars such as Coale and Demeny, Keyfitz and others have developed models relating levels of fertility and mortality to sex and age composition of the population, based on predictable changes in fertility and mortality as nations go through the demographic transition. However, no predictable patterns of transition for the migration phenomenon have yet been generated, unless one considers that the sort of rural to urban and urban to urban movements analyzed by Zipf and others meets this condition (Zipf, 1946: 177-686).

Little attention has been directed towards the particular problem of developing methodology for projecting migration trends; probably this is because there is such a great need to refine the estimate of the parameter itself. While it can undoubtedly be argued that demographers should not attempt to project migration until the means of assessing present patterns and trends in migration have been substantially improved, real life policy problems do not permit rigorous adherence to such an aim. Because population projections frequently serve as a frame of reference for decision-making—and indeed, may condition the outcome of results — it is a first priority that projections be made (Sonenblum, 1967). Projections need to take both natural increase and migration into account; they need to reflect the widest input of information that can be achieved and the highest technical competence available.

APPENDIX

Analytic Procedure for Smoothing and Projecting the Migration Rates

1. We form the 318×14 matrix, let us call it X , which contains relative migration ratios (actual population in an age group divided by

the expected number based on the population in the previous age group at the previous time and the assumed survival rate) or the logarithms of these ratios. There are 14 age groups in this matrix, since we cannot calculate the ratio for the 0-5 group and we choose to omit people over age 65 because of difficulty in obtaining the expected numbers. There are 318 rows in the matrix since we have 6 rows for each county (male and female at three time points).

2. We will form a smoothed version of X , let us call the smoothed version X^* , by taking the least-squares best rank- K approximation to it. In this study we have tried different ranks, $K = 1, 2, 3$ and 4. The calculation follows C. Eckart & G. Young, 'The approximation of one matrix by another of lower rank', *Psychometrika*, 1936, I, 211-218, and is related to principal components analysis. Specifically, we calculate the eigenvalues and vectors of $X'X$. Let Q have the unitized eigenvectors as column and B have the corresponding eigenvalues as diagonal entries. Then we calculate $P = XQB^{-1/2}$ and it can be shown that $X = PB^{1/2}Q'$. Then X^* is formed by dropping all but the first K columns of P and Q and all but the first K rows and columns of B and reforming the product. (We assume that the eigenvalues are presented in descending order.)

3. We can also write $X^* = AF$ where $A = P$ and $F = M^{1/2}Q'$, again dropping columns and rows as above. We can consider that P gives K scores for each county at each time and for each sex. These scores should be very stable summaries of the complete pattern of migration ratios. The matrix F gives the pattern conversion from the scores to the estimated migration ratios. Looking at what we have done in this light, we have expressed each observed migrations ratio pattern as the weighted sum of a few basic patterns.

4. Given our summary scores, A , for each county, sex and time combination, we do simple extrapolation to a 1971-76 period, then reapply the pattern conversions, F , to obtain complete 1971-76 estimates. If we started out operating in logarithms, we convert back to raw ratios by exponentiation then we can convert to net or percentage migration figures.

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III EMPIRICAL FINDINGS:

**USSR, Asia, Africa, South America
and North America**

RURAL SOCIOECONOMIC DEVELOPMENT AND THE MIGRATION OF RURAL POPULATIONS

Tatiana I Zaslavskaia and L P Liashenko

The Soviet countryside is now experiencing a period of intensive economic and sociocultural development stemming from the gradual spread, development and penetration of technological change in agriculture. The most important aspects of socioeconomic transformation of the rural sector are technical innovations and new technologies being introduced in all branches of agriculture; higher productivity of farm labour and a higher educational level (from 8 to 10 years); the amalgamation of small backward hamlets into large modern settlements, the reduction of household sizes, the growth of retail sales, public catering, recreational and consumer servicing of the rural population.

These processes facilitate the growth of agricultural production. Over five years (1965-70) the farm products yield in collective and state farms of the RSFSR increased 33 percent; the yield in West Siberia increased 45 percent; the labour productivity increased 47 and 66 percent, respectively.

The long-run tasks of Soviet society are not small in scope. As the agricultural level achieved at present does not satisfy the ever-increasing needs of society completely, it will be necessary, over the nearest five-year periods, to increase agricultural production 2 — 2.5 times, while freeing a considerable number of workers previously engaged in agri-

culture. This calls for additional increases in productivity growth rates and, hence, further social transformations of the rural world. The paramount goal of the advanced socialist society, i.e. gradual wiping out of urban-rural distinctions, has obtained a particular importance and practical character in our time.

As is known, the rural sector is a relatively backward and dependent element of contemporary societies. The rates and directions of its development within different societies are set up, firstly by the type of preponderant relations of production and, secondly, by the specific socioeconomic relations between the countryside and society. Under socialism, urban-rural relations are an important object of state planning and management.

The system of socioeconomic relations between the rural sector and the rest of the society may be presented as exchange of material goods (farm products, means of production, consumer goods), income, skilled manpower, labour of permanent population (as when rural dwellers are employed in cities and urbanites in country); cultural, scientific and technical information; social norms and value orientations. A specific type of exchange is population moving from country to city or from city to country. In principle, the migrational population exchange can be viewed as an element of a larger whole; i.e. of the system of socioeconomic relationships between the society and the rural world.

It should be emphasized that under consideration here is a system whose elements are closely interconnected rather than a set of relatively independent parts. In particular, the directions and intensity of human migration between city and country are determined, above all, by the relative distribution of national income, that is by the respective share of city and country in capital investments, public consumption funds, etc.

On the other hand the migrational process undoubtedly exercises a reverse effect on the character of urban-rural relations as well as on societal development as a whole. The main economic function of human migration is to secure quantitative and qualitative equilibrium between labour supply and labour demand in different regions and different settlements. Its main social function, however, is in 'servicing' labour and social mobility of population, including 'vertical' social

movements, and in securing on this ground a more complete gratification of people's needs at the given aggregate consumption level of the society (Zhuchenko, et al., 1972: 16-23). How, then, is the relationship between human migration and other processes of socioeconomic development in rural areas concretely demonstrated in particular settlements? This question has recently gained the attention of scholars in different parts of the world (Conning, 1971; Fuguit, 1971; Zaslavskaya, 1970; Zhuchenko, et al., 1972).

We shall try to answer it with reference to Novosibirsk province. In 1970 there were 2,148 rural settlements spread over an area of 17.8 million square kilometres. The total rural population in the province was 842,000 persons. On average, one rural settlement accounted for 400 inhabitants and 83 square km of adjacent territory; average distance between two neighbouring settlements in most densely populated parts of the province was 5-6 km and in the least densely populated 15-20 km. Long distances, the poor quality of roads and of transport connections, as well as the severe Siberian climate restrict spatial mobility of the rural population.

Rural settlements in Siberia are sharply differentiated by major characteristics describing living conditions, i.e. by socioeconomic levels. Thus, in 1970 21.8 percent of the rural population of the province lived in villages with less than 300 inhabitants having as a rule only a shop, small clubhouse and medical aid station, whereas 8.4 percent of the population lived in large settlements with over 2,000 inhabitants having complete mass service facilities.

The process of socioeconomic development, transformation of the countryside and agriculture embraces all kinds of settlements. The effect exercised by migratory movement of population on these processes is not simple. On the one hand cityward migration of youth with a higher level of general education and special training reduces the 'sociodemographic potential' of the contemporary countryside, simultaneously decreasing the total size of population and making its qualitative composition worse. On the other hand some migrants moving to cities, with the aim of raising their educational level and skills, come back to the country with a much broader outlook on life, having assimilated urban patterns and values. Besides, specialists

graduating from agricultural, educational, medical and other schools and colleges are regularly sent to the countryside. Clearly, this migration facilitates rural development, gradual urbanization, and urbanization of its way of life. The more favourable to the rural side the ratio of 'to' and 'fro' flows of migration, the better the prospects for its rapid socioeconomic development.

But the relationship of migrational in- and outflows is, in its turn, determined by the socioeconomic level of the settlement. Naturally a hypothesis arises that the relationship between migration and the countryside's socioeconomic development is of a 'closed circle' type, where one process is speeded up by the other. Depending on specific conditions, two opposite cases of the interrelation between these processes can be observed. In some instances the so-called 'vicious circle' arises when insufficient growth rates and socioeconomic level of development cause an accelerated exodus of the inhabitants which then becomes an additional brake on rural development. In other instances the same circular relationship works in the opposite direction: highly advanced and rapidly growing settlements attract new population, not only from surrounding rural areas, but from small towns as well; this increases their rates of socioeconomic growth still more.

If this hypothesis is true, human migration may be viewed as part of the universal social mechanism increasing the differentiation of rural settlements by growth rates and socioeconomic levels and, eventually, leading to a transformation of the whole. To test the validity of this hypothesis the dependence of rural population migration upon the level and nature of socioeconomic development in settlements was studied, as well as the reverse dependence of socioeconomic shifts in rural development upon population migration. The results of each part of the investigation are discussed subsequently.

THE DEPENDENCE OF POPULATION MIGRATION UPON SOCIOECONOMIC DEVELOPMENT OF RURAL SETTLEMENTS

A study of settlements at different stages and in different conditions of development presupposes their classification in the light of these stages and conditions. To this end, we used the so called linguistic method of automatic classification of multivariate objects. The objects of classification were 170 rural settlements which fell into a 10 percent sample survey of the Siberian countryside. The survey was conducted in 1967 and then repeated in 1972. As indicators, 22 parameters of socio-economic development of settlements were used, characterizing the employment structure of the population in the sphere of public production; the level and structure of personal incomes of the population; the average years of schooling for adults; the degree of development of the major services (schools, kindergartens and nurseries, trade, health services, consumer and bus services etc.); and distance from intersettlement service centres (central farmsteads of state or collective farms, district seats etc.). All the indicators were taken as of 1967. On the basis of the linguistic method of classification (which is a combination of factor analysis with the taxonomy method) seven settlement types differentiated by four factors were extracted: development level of local service facilities, remoteness from larger centres of intersettlement services, type of housing (traditionally rural or urbanized) and the degree of development of non-farm productions.¹

Under the **first type** conventionally (termed 'remote hinterland') 25 percent of settlements were subsumed which accounted for 11 percent of population. These were small, poorly developed hamlets with traditional rural-type housing, situated far from the intersettlement service centres and representing the most backward, non-urbanized type.

The **second type** ('near hinterland') includes 27 percent of settlements with 15 percent of population. Unlike the previous type, the settlements covered by it are not sufficiently developed but situated not far from more advanced centres.

The **third type** ('near urbanized hinterland') represents a much smaller percentage of settlements: it embraces 10 percent of settlements with 4 percent of the population residing in them. It differs from the second type by more urbanized type of housing, i.e. by higher relative proportion of multi-apartment houses with some conveniences and by smaller size of garden plots.

The **fourth type** ('remote rural local centres') accounts for 8 percent of settlements and 9 percent of population. Included here are settlements remotely situated from centres of a higher level, with moderate density of population, traditional rural-type housing and a low level of services; they often play the role of local centres for the settlements of the first type.

The **fifth type** ('near rural local centres') includes 14 percent of settlements and 20 percent of the rural population. It differs from the fourth type in that the settlements relating to it are situated not far from intersettlement service centres.

The last two types embrace most advanced and urbanized rural settlements. They differ in the character of production specialization. The **sixth type** ('urbanized agrarian centres') covered 9 percent of settlements (predominantly central farmsteads of collective and state farms) which accounted for 18 percent of inhabitants. The distinctive features of this type of settlements are a high level of services available to the population, urbanized type of residential housing and predominantly agrarian specialization of production sphere.

The **seventh type** of settlements ('urbanized agrarian-industrial centres') is characterized by substantial development of the non-farm branches of production. It accounts for 7 percent of settlements with 23 percent of the rural population (this type includes most densely populated and advanced settlements).

Before analyzing the migrational movement of the inhabitants from the foregoing settlement types we should stress the multivariate nature of our classification based on several independent attributes. Strict ranking on the scale 'industrialization-urbanization' can be made, however, only regarding the polar types, i.e. the first and the last. The relative level of socioeconomic development of the third and fourth types, for example, is rather difficult to define. The settlements of

the third type have poorer services but urbanized type of building and are situated closer to social and cultural centres than the settlements of the fourth type. It is important to keep this circumstance in mind in the course of subsequent analysis.

The set of dimensions by which the typology was built did not include demographic characteristics in general or the human migration dimension in particular. Further calculation, however, has shown that these attributes are highly differentiated for most settlement types.

The indicators of natural shift of population for the various settlement types compared did not differ much, which shows that the decisive factor in their demographic change was migration (Table 1).

Between 1962 and 1971 the total size of population of the first three types of settlements decreased between 29.0 and 36.5 percent, whereas that of the last two increased between 15.6 and 20.4 percent. Socially and economically advanced settlements possess an ability to attract population, whereas the comparatively backward are losing it. As the level of a settlement rises, the ratio of in- to out-migration flows rapidly, and this is due to different factors. The settlements of the first five types have a relatively constant proportion of arrivals, about 40 percent annually. At the same time in the settlements of the sixth type this figure increases to 75 percent and in those of the seventh type to 112 percent. This migration turnover intensity by departure follows another pattern. It is nearly the same for the first three types, then it decreases going down to its minimum in the settlements of the fifth type, but when passing to the sixth and especially to the seventh types it jumps again. Therefore, the positive net migration characteristic of most advanced settlements is achieved through fairly high population turnover instead of stabilization.

The figures in Table 1 do not differentiate migratory exchange with cities and other rural settlements though we may gather that a substantial part of the inflow to urbanized settlements is made up of former inhabitants of lower-level rural settlements. This hypothesis can be tested by examining the distribution of birthplaces of the population in different settlement types (Table 2).

In urbanized settlements (3rd, 6th and 7th types) the proportion of local born is a half or a third that in others (14 — 24 percent against

TABLE 1
Distinctive Features of Migration in Settlements
of Different Types

Settlement Type	Migration Indicators for 1962-1971				
	Relative Net Mi- gration, %	Migration Turnover, %		Total	No. of Arrivals Per 100 Departures
		By De- parture	By Arrival		
1. Remote rural hinterland	-46.7	77.9	31.2	109.1	40
2. Near rural hinterland	-41.9	81.8	39.9	121.7	49
3. Near urbanized hinterland	-42.2	83.4	41.3	124.7	49
4. Remote rural local centres	-29.1	70.1	41.0	111.1	59
5. Near rural local centres	-16.2	61.7	45.5	107.2	74
6. Urbanized agrarian centres	+3.6	71.7	75.3	147.0	104
7. Urbanized agrarian- industrial centres	+8.7	103.3	112.0	215.3	103

37 — 48 percent). The major part of residents in them (65 — 75 percent against 46 — 57 percent in other settlements) are those born in other villages, which confirms the above hypothesis. The preponderance of the arrivals over the native population seems to point to a younger 'age' of the urbanized settlements. Further, they are more attractive than traditional villages even for the native urbanites whose proportion of the population is four times that in settlements of the first type.

TABLE 2
Birthplace of Inhabitants in Different Types
of Settlements

Settlement Type	Proportion (%) of Workers Born In . . .		
	The Given Settlement	Another Settlement or Rural Non-farm	A City
1. Remote rural hinterland	47.6	49.8	2.5
2. Near rural hinterland	41.2	54.5	4.3
3. Near urbanized hinterland	20.0	70.5	9.5
4. Remote rural local centres	47.4	46.3	6.4
5. Near rural local centres	37.0	56.6	6.4
6. Urbanized agrarian centres	14.3	75.5	10.2
7. Urbanized agrarian-industrial centres	24.0	65.5	10.5

The data considered may be supplemented by more detailed evidence about the character of preceding migrations of population in the settlement types compared (Table 3). It should be noted that only a very small proportion of persons never left their village during their lifetime. Even in the remote rural hinterland, only 32.3 percent were untouched by urbanization and in urbanized settlements it drops to 10 — 13 percent. The proportion of population having over a year's experience of living in a city, on the contrary, should be regarded as high, particularly for settlements of types five to seven, in which it is 33 — 41 percent. Settlements with a high socioeconomic level are, naturally, more attractive for those rural dwellers who became acquainted with the urban way of life.

TABLE 3
Characteristics of Previous Migration of the Inhabitants
of Different Settlement Types

Settlement Type	Percentage of Workers (%) who . . .		
	Left this Settlement	Lived in Other Villages or Rural Non-farms*	Lived in Cities (one year or more)
1. Remote rural hinterland	32.3	50.0	17.7
2. Near rural hinterland	28.8	45.4	25.8
3. Near urbanized hinterland	18.9	49.4	31.7
4. Remote rural local centres	29.9	43.8	26.3
5. Near rural local centres	20.4	46.4	33.2
6. Urbanized agrarian centres	10.4	54.1	35.6
7. Urbanized agrarian-industrial centres	12.8	45.8	41.4

**Including those in military service.*

Plans to leave the settlement or to remain in it are closely related to people's expectations concerning the future of their settlement (whether it will grow up, 'stagnate' or be eliminated). The optimism in this respect increases from type one to type seven. While in the remote rural hinterland, 55 percent of residents feel that their village will disappear and only 17 percent that it will grow, among the residents of urbanized agrarian-industrial settlements the former opinion is held by 3.2 percent and the latter by 85 percent. Accordingly, the percentage of those who are going to migrate also changes. In the settlements of type one the percentage of potential migrants is 35.3 percent, of types four and five 19.2 – 22.3 percent, of types six and seven 15.8

— 20.3 percent. The lowest propensity to migration was revealed by residents of urbanized agrarian centres. When passing from lower to higher level settlements, the total percentage of out-migrants decreases, and so does the intention to migrate. In most urbanized settlements a firm intention to leave was reported by 60 percent of all potential migrants, with 40 percent in doubt. In the settlements of the first type, however, these figures were 75 percent and 25 percent respectively.

Interesting differences in the evaluations of merits of urban or rural life were reported by residents of settlements which were exposed to urbanization. Our questionnaire contained three questions, namely:

- a) 'Where do you think it is better to live: in the city or in the country?'
- b) 'Where would you prefer to live: in the city or in the country?'
- c) 'Where are you going to move: to an urban or rural place?' (The latter question was put to those who reported their intention to leave this settlement.) The data obtained appear in Table 4.

About 40 percent of rural workers think that life in the city is better than life in the country. This shows that urban values have penetrated deeply into the consciousness of rural people. Further, it would be interesting to know whether this opinion is expressed by persons who have experienced urban life or by those who have not, but such evidence is not available to us. The proportion of people ranking urban life higher than rural is lower in opposite types of settlements and is the highest in the middle of the scale, i.e. in rural local centres. It seems that the population of small settlements with traditional rural life have too few contacts with the city to build up a serious urban orientation. When passing to intermediate types of settlements (rural local centres) the orientation toward urban ways of life increases but the actual living conditions do not catch up with the rising needs of inhabitants. The gap emerging between the level of needs and the possibilities for their gratification is reflected in the replies of nearly half the inhabitants that life is better in the city than in the country. With the transition to types involving most advanced rural settlements the picture changes abruptly. Thus in settlements of type six the proportion of urban life adherents is two thirds that in settlements of type five. Moreover, in highly urbanized settlements, the proportion of urban life adherents not only is no higher than in other settlements but is lower than the proportion of persons with actual experience of city life who could realistically

TABLE 4
The Attitudes to Urban and Rural Life Among the
Inhabitants of Different Settlement Types

Settlement Type	Percentage (%) of Those who Replied that:			
	Life is Better in the City than in the Country	They would Prefer to Live in the City	They are Going to Move to the City	Ratio of Column 3 to Column 1
1. Remote rural hinterland	40.4	19.3	12.1	30.0
2. Near rural hinterland	37.7	16.1	4.7	12.4
3. Near urbanized hinterland	37.8	18.9	7.1	18.8
4. Remote rural local centres	42.8	17.5	5.7	13.3
5. Near rural local centres	47.9	21.4	8.5	17.6
6. Urbanized agrarian centres	32.3	16.7	4.6	14.3
7. Urbanized agrarian- industrial centres	36.4	21.5	6.8	18.6

compare merits and demerits of either way of life. This shows that a modern rural settlement having a developed production sphere and diversified forms of mass services can compete not only with other rural settlements but with the city as well.

The question of where the respondent himself would prefer to live helps to reveal more specific urban orientations. The analysis shows that only a half of those reporting urban life better than the rural one actually want to live in the city; therefore, the others think that urban life is better for somebody else, better 'in general' but not for themselves. This allows us to conclude that urban values have made a superficial impression and they have formed stereotypes rather than actual orientations and attitudes. The proportion of persons who would rather

live in the city than in the village is nearly the same in all types of settlements, i.e. 16 — 19 percent. It rises above this level (to 21.4 — 21.5 percent) only in type five which includes the suburb of a city with a million population, and in type seven, i.e. in agrarian-industrial centres with a high percentage of persons employed in manufacturing and construction.

To move to the city is the intention of one-third of those who would like to live there and of one-sixth of those who thought the urban life better than rural. At this level the indicators of alternative settlements are differentiated again. Most potential cityward migrants are found in settlements of type one which are already disappearing. When facing the necessity of shifting their place of residence, some decide to move to large cities instead of central farmsteads or nearby townships. In potential rural-urban migration intensity the second place is held by settlements of type five which are situated in immediate proximity to large urban centres. Third place is shared by settlement types seven and two, noted for urbanized type of building and a substantial number employed in non-farm production for whom the adaptation to urban life is easier. The last column of the table characterizes the degree of reality of preferences for living in the city reported by the inhabitants in different groups of settlements. The ranking of settlement types according to this indicator is substantially the same as their ranking on the proportion of potential cityward migrants.

The data shows that the level, rates and character of socioeconomic development of settlements exercise a serious if not decisive impact on rural population migration and, consequently, on the qualitative composition of the population living in settlements of different types, on the character of their previous life experience, current needs and orientations.

THE DEPENDENCE OF SOCIOECONOMIC DEVELOPMENT OF RURAL SETTLEMENTS ON POPULATION MIGRATION

In order to get insight into the reverse dependence of rural socioeconomic development on human migration, the rural settlements under

TABLE 5
Population Structure Change in Settlements with Different Net Migrations

Settlement Group	Average Relative Net Migration for 1967-1971, %	No. of Settlements	Average No. of Inhabitants per Settlement		Percent Change for Age Groups 1967-1971			
			1967	1972	1972 in % of 1967	0-15	16-54 (59)	50 (60) and over
I	-62.1	19	256	150	58.6	+0.1	-6.9	+7.0
II	-28.0	56	399	317	79.4	-0.3	-4.7	+6.1
III	-14.7	37	562	516	91.8	-0.3	3.4	+3.5
IV	-4.5	24	825	825	100.0	+0.2	-4.0	+3.8
V	+10.7	21	1,067	1,231	115.3	-1.4	-1.8	+3.2
Total	-9.2	157	574	544	94.7	-0.9	-3.1	+4.0

study² were grouped according to relative net migration for five years (1967-71). The first group includes settlements which had lost 40 percent or more of their population in this period; the second, those in which the negative net migration was 20 to 40 percent; the third, settlements with net migration 0 to 10 percent; under the fifth, those with positive net migration. For each of these groups of settlements, mean indicators of socioeconomic development for 1967 and 1972 were calculated as well as their absolute and relative increments for the five-year period. The same dimensions which were used in the solution of the first part of the problem were examined as indicators of socioeconomic development. The calculation results show that both absolute and relative rates of growth, by most indicators, were substantially higher where net migration was positive.

The impact of migration shows up primarily in the changes in size and structure of the population (Table 5). Small settlements are losing their population more rapidly. The mean population (number of inhabitants) in settlements of the first group is about a quarter of the respective figure for the fifth group. Over the period under consideration this difference has increased since the mean population of the first group of settlements has diminished by 15.3 percent. The migratory processes have had a particular effect on the population age structure.

In general the settlements under study are marked by an aging population. The intensity of this process substantially depends on population migration. The proportion of children in the settlement groups compared has not changed significantly, but the ratio of the able-bodied to those in retirement has undergone substantial shifts. The settlements with the most intense exodus are losing primarily their able-bodied persons. This explains the substantial (2.2 — 3.8 times) difference between the extreme settlement groups with regard to the change in the proportion of persons in the able-bodied and retired groups. Therefore, in terms of population age structure, the most advantageous position is held by those settlements which are either losing an insignificant part of their population or, the reverse, are attracting new inhabitants.

In order to find out whether the intensity of migratory exodus affects the rates of socioeconomic development of the countryside use will be made of the data on change (for the period 1967-72) in the

proportion of settlements with different service facilities. One should bear in mind that the settlements of the last groups, being larger on the average, are characterized by higher initial socioeconomic indicators. In 1967 the average pay, the general and the special education of the workers in the fifth settlement group considerably exceeded the respective figures for the settlements in the first group. This makes it possible to anticipate higher rates of growth in the first settlement groups as compared with the last. Indeed, there are indicators for this tendency (Table 6).

Due to higher rates of growth of the development indicators under consideration the distinctions between the groups studied are diminishing in settlements of the first type. Thus, in small settlements where the nature of employment makes the relative importance of low paid workers higher, the pay is rising more rapidly. By 1972, however, the average wages had remained 8 percent lower here than in settlements of the fifth group. The income from private garden plots has diminished more in the first group, but remained one-and-a-half times higher than in settlements of the last group. The transition to compulsory secondary education is being realized everywhere; therefore the average educational level of the population is growing faster where its initial level

TABLE 6
The Dynamics of Socioeconomic Development Indicators
of Settlements with Different Net Migrations

Settlement Group	Percent Increase (+) or decrease (–) in Indicators, 1967-1971				
	Average Pay	Income from Private Household	Workers' Education		No. of Kinds of Commu- nications*
			General	Special	
I	+38.5	–16.0	+20.1	+54.8	+18.0
II	+34.8	–7.3	+13.4	+37.2	+33.3
III	+34.7	–6.9	+9.4	+26.4	+25.0
IV	+34.5	–8.0	+13.8	+44.8	+27.0
V	+31.4	–13.9	+7.2	+38.3	+11.2
Total	+35.5	–15.6	+12.4	+39.1	+25.8

*Three kinds of communications are considered: radio, electricity, telephone.

was lower. But even by 1972 the general and special education of the workers in the fifth group of settlements was higher, when compared to the first, by 6 and 40 percent, respectively. Therefore, according to the foregoing indicators, the settlements under study are approaching the same level.

At the same time, the analysis of the wide range of development indicators reveals the directly opposite tendency which cannot be explained other than by the impact of human migration. It consists in a substantial rise in rates of socioeconomic development between the first and the last group of settlements in spite of the considerably higher initial level of the latter (Table 7).

While the settlements of the fourth and fifth groups are marked by high growth rates in public services for the population, the first group of settlements does not develop at all, and the second and third groups are developing much more slowly. This seems to be just the consequence of migration of population whose exodus, in fact, makes construction of cultural and service facilities in the first type of settlements pointless or, in any case, inefficient.

As a result of this pattern, the differences between settlements shown by the socioeconomic level of the population does not decrease, but instead increases in a number of instances. In 1967, the proportion of settlements having a bus stop was 3.5 times greater for the fifth as compared to the first settlement group. In 1972, the difference was sixfold. The respective figures for having a restaurant were 4.6 and 5.7 times; for having a middle school, 3.4 and 3.6 times. The difference in the mean number of persons working in retailing occupations has increased from 4.3 to 6.3 times.

The data reveal the existence of two types of mechanisms pertaining to the impact of society on the socioeconomic development of the rural sector, one of which is general in character, weakly differentiating the settlements, and the other is just specific to the level of settlements. Under the first type, the wage policy in agriculture and related fields, the control over the system of general and special training and the development of mass media are subsumed; under the second, the development of the sphere of services for the rural population.

The impact exercised by these mechanisms upon the development of various rural settlements is not the same. While the mechanism of the former type largely facilitates the leveling off of socioeconomic

TABLE 7
The Dynamics of Indicators of Services Development in Settlements with Different Net Migrations

Settlement Group	Percent increase (+) or decrease (–) in Indicators, 1967-1971							
	The Proportion of Settlements Having						Provision of	
	Middle School	Restau- rant	Running Water	Tailor Shop	Barber Shop	Repair Shop	Pre-school Facilities	No. of Workers in Retail Sales
I	0.0	0.0	+5.5	–5.0	0.0	0.0	–50.00	–14.1
II	+2.0	+1.8	+25.0	+3.6	0.0	0.0	0.0	+3.6
III	+5.5	+0.1	+18.5	+5.4	–2.7	–20.0	–20.0	+20.8
IV	+4.1	0.0	+20.9	+4.4	+4.1	+8.4	+5.8	+15.0
V	+10.0	+19.1	+24.7	+14.2	+4.7	+9.6	+4.2	+25.0
Total	+3.1	+3.5	+18.5	+1.8	+1.2	+2.6	0.0	+14.9

development in individual settlements, the latter type intensifies their differentiation. As a consequence, in settlements with high migratory outflow of population a certain discrepancy emerges between high growth rates in certain indicators of socioeconomic development (in particular, between education level, skills of labour, wages), on the one hand, and extremely retarded development in the sphere of services, on the other. This discrepancy becomes an additional stimulus for migration. This confirms the existence of the 'circular dependence' which was postulated at the beginning of the present paper.

NOTES

¹ For more detail about the problem statement, the content of the method used and research findings see the paper by T. I. Zaslavskaja and I. B. Muchnik 'Linguistic Method for Classification of Multivariate Social Objects' submitted at the Symposium on Programming and Computers.

² Only the data from 157 settlements which was surveyed also in 1972.

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INTERNAL MIGRATION AND REGIONAL DEVELOPMENT IN TAIWAN

Wen Lang Li

There is not much doubt that internal migration is related to regional economic growth, as Kuznets and Thomas (1957) have clearly documented. What is controversial, however, is the nature of the impact of internal migration on regional economic development (Okun, 1968). On the one hand, Myrdal (1957) argued that because it is often the advanced regions which attract migrants, internal migration tends to widen regional disparity, and thus to handicap the overall economic development. On the other hand, Easterlin (1960) concluded that inter-regional migration is among the important forces in the convergence of regional per capita income. Also some studies (e.g. Tachi, 1964) have shown that the mechanism of population migration is indeed a movement to balance the distribution of population against the regional inequality in income distribution.

It seems obvious that a basic approach to this problem (cf. Okun and Richardson, 1961) should be a comparison of the economic and demographic changes of the regions, to determine whether the more rapidly growing regions are also advancing economically, and whether the relation between internal migration and economic development depends on the socioeconomic characteristics of the attracting regions.

According to Williamson (1965), whether migration is related to regional disparity is largely determined by the stage of development of

the society as a whole. Rising regional inequality is typical of early stages, regional convergence of the more mature stage. In this sense, internal migration and regional development are not a direct one-to-one correspondence; instead, the stage of societal development acts as an intervening variable. It is only in the early stage of development that internal migration is likely to be related to rising regional disparity.

The purpose of this article is to document the historical patterns of internal migration and regional development in Taiwan in the course of its relatively low level of economic development. Specifically, it endeavours to establish the following points:

1. In Taiwan the pattern of migration is from the relatively developed to the relatively underdeveloped regions.
2. Most migrants are in the demographic brackets associated with higher economic productivity than the average population.
3. Therefore, the consequence of population migration is to reduce regional disparity.

The study also presents some purely descriptive analysis. Although sufficient statistical data exist, this aspect of Taiwanese population development has never been systematically analyzed. In fact, only in Barclay's work (1951) do we find any attention to migration and urban growth, but even this is only a brief discussion that does not include most of the present study's topics.

NATURE OF THE DATA

The data used in this study came from seven Taiwanese censuses conducted during the 50-year Japanese administration (1895-1945), in 1905, 1915, 1920, 1925, 1930, 1935 and 1940. The first two censuses were provisional and they differed from the rest in that they classified administrative units by regions rather than prefectures (e.g. Far North, North, Central, etc.), so that their data cannot be directly compared

with those from subsequent censuses. Consequently, we can only construct a continuous historical series of migration estimates from 1920 onward.

There was a slight change of prefectural units between 1925 and 1930. In the censuses of 1920 and 1925, there were seven prefectures; namely, Taipei, Hsinchu, Taichung, Tainan, Kaoshiung, Taitung, and Hualien. Beginning in 1930 Penghu was made independent of Kaoshiung and became the eighth prefecture (Figure 1). This change does not hinder the construction of an historical series of migration estimates over 1920-40, since the combined population of Kaoshiung and Penghu in 1930 is comparable with Kaoshiung's population in 1925.

Every five years, beginning in 1920, the Taiwan census was officially taken at 0.00 hours on 1 October. Age and sex distributions of each prefecture are available in the census publications, and the native population is separately classified. Since the migration of native Taiwanese to and from the island was negligible throughout the period, they may be considered a closed population. Place-of-birth data are less complete, available only in the three comprehensive censuses in 1920, 1930, and 1940, and only in 1920 were the data cross-classified by age and sex. These data, however, give us a good opportunity to analyze the migration stream.

In this study, 'migrants' are defined as those who changed their prefectures of residence from one census to another. Lifetime migrants are persons whose prefectures of birth differ from their prefectures of residence at the time of a census. With these data, it is possible to analyze the patterns of both in-migration and out-migration, and analysis of migration streams is based on the movement of 'lifetime migrants'.

'Intercensal migration', on the other hand, is an indirect measure of migration during a five-year interval, namely, 1920-25, 1930-35 or 1935-40. Migration is estimated by applying the Forward Census Survival Ratio method to the age-sex distribution data of each prefecture (UN, 1970). Since they give only the net migration, the estimates cannot be used to analyze migration streams, but they can be more useful in the sense that they refer to a specific period of time. So we use both measures, 'intercensal migration' and 'lifetime migration', to study migration selectivity.

BOUNDARIES OF AREAL UNITS (PREFECTURES)
OF TAIWAN, 1920-1945



ESTIMATES OF MIGRATION

Taiwan is an island of roughly 14,000 square miles. The average size of each prefecture is about 2,000 square miles, with a range of 400 to 3,000 square miles. Not surprisingly, the frequency of interprefectural migration was much greater than in the United States or other countries with larger geographic units. On the other hand, the difficulty of communication in Taiwan during this period may have impeded migration.

With census data, one can use Census Survival Ratios (CSR) to produce an historical series of migration estimates from 1920 to 1940 (Table 1). As would be expected in a closed population with adequate age reporting, these ratios are consistently less than unity, with a single exception of the 1925-30 period, because of errors in the enumeration of the aboriginal population in 1930 (Barclay, 1951: 13-15). In general, however, the results suggest that enumeration is reasonably accurate and that the assumption of a closed population holds for the entire series.

The scope of this paper does not allow the presentation of the entire series of migration estimates for each prefecture. It is limited to the net migration rate for each prefecture, that is, the ratio of the estimated migration to the average population in two consecutive censuses. The rate of net migration is indicative of the impact of migration on the population of that prefecture.

The Taipei prefecture has been gaining in population since the beginning of the series, presumably in part because economic prosperity followed the change of capital from Tainan to Taipei. In general, the gains of females were smaller than those of males. Beginning in 1920, Taipei's male population gained from migration roughly 1.0 to 1.5 percent quinquennially, except during the period of 1930-35. For females, the only period of migration loss was in 1925-30. This may imply some important differences between males and females in responding to the economic depression.

Hsinchu underwent a heavy out-migration throughout the history of Taiwan, partly because of its rugged topography, one assumes, partly because of the continuous conflict between different ethnic groups.

TABLE 1
Census Survival Ratios for Five-Year Intercensal Periods, Native Population of Taiwan
By Age and Sex, 1920-40

Age At End Of Period	1920-25		1925-30		1930-35		1935-40	
	Males	Females	Males	Females	Males	Females	Males	Females
5 - 9	.9559	.9718	.9834	.9718	.9199	.9111	.9210	.9162
10 - 14	.9744	.9734	.9937	.9946	.9795	.9822	.9841	.9862
15 - 19	.9696	.9768	1.0026	1.0129	.9725	.9811	.9581	.9854
20 - 24	.9561	.9600	.9651	.9674	.9669	.9681	.9461	.9702
25 - 29	.9432	.9515	.9615	.9676	.9616	.9659	.9476	.9600
30 - 34	.9295	.9440	.9547	.9612	.9522	.9602	.9492	.9606
35 - 39	.9136	.9330	.9366	.9512	.9408	.9505	.9508	.9564
40 - 44	.8932	.9268	.9311	.9653	.9242	.9415	.9283	.9470
45 - 49	.8717	.9266	.8989	.9443	.9004	.9649	.8907	.9362
50 - 54	.8421	.9073	.8687	.9161	.8790	.9239	.8668	.9190
55 - 59	.8054	.8808	.8342	.9049	.8493	.9049	.8351	.8985
60 - 64	.7468	.8429	.7697	.8512	.7921	.8654	.7824	.8636
65 - 69	.6867	.7812	.6977	.7938	.8251	.8138	.7241	.8106
70 - 74	.6011	.7107	.6169	.7264	.6455	.7384	.6324	.7390
75+	.4487	.5276	.4448	.5263	.4773	.5385	.4453	.5147

Source: Computed from Census of 1920, Table 2, 4-45, Census of 1925, Table 4, 1150-1173, Census of 1930, Table 8 of each pre-fectural volume, Census of 1935, Table 7, 217-292 and Census of 1940, Table 9, 40-45.

During 1920-25, its loss was 1.5 percent for males and 2.1 percent for females, and the rate increased thereafter.

Taichung tended to shift for both males and females from gaining to losing during the 50 years of Japanese administration. Among males, the migration gain was 0.8 percent in 1920-25, 0.4 percent in 1925-30, and 0.3 percent in 1930-35. Then, it lost nearly 2 percent in 1935-40.

Tainan, a long-settled area, lost its place as the island's political center after the beginning of Japanese rule. Since 1920, it has contributed the largest net out-migration, gaining only in 1930-35, during the economic depression. Thus Taipei and Tainan represented the opposite extremes of a migration picture.

Kaoshiung in combination with Penghu lost by migration in 1920-25, but gained in 1925-30. Since Penghu has always been a losing prefecture, we may thus conclude that during the period of our observation, Kaoshiung became an increasingly attractive area for in-migration. The population of Penghu, a group of small islands west of Taiwan, were mostly fishermen, since other natural resources were scarce. During 1935-40, when this prefecture lost 10 percent of its male and 6 percent of its female population through migration, it ranked first in out-migration among all the prefectures in every period.

Taitung and Hualien have similar geographic characteristics: as two prefectures in the east of Taiwan, they were newly settled areas during this period. Although they ranked lowest among all the prefectures in the rate of urbanization or industrialization, both prefectures have attracted many out-migrants from the West, Hualien somewhat more than Taitung. In fact, based on the ratio of its small population Hualien attracted the most migration of all the prefectures.

STREAMS OF MIGRATION

The above discussion deals with the historical trend of interprefectural migration, which is based on the data drawn from the CSR estimates. What emerged is an overall picture of **net** migration. Additional insight

TABLE 2
Rates of Intercensal Migration of Taiwanese
Population, by Age and Sex, 1920-40
(Per thousand)

Age At End Of Period	1920-25	1925-30	1930-35	1935-40
<i>Males:</i>				
5 — 9	3.89	10.76	4.53	6.21
10 — 14	5.88	11.80	8.44	13.08
15 — 19	9.71	15.71	17.40	33.54
20 — 24	11.72	24.89	13.61	27.20
25 — 29	10.37	20.89	11.36	21.58
30 — 34	9.09	16.62	8.97	15.28
35 — 39	9.23	14.64	6.61	12.10
40 — 44	9.88	14.29	5.81	10.06
45 — 49	11.18	10.58	5.21	9.64
50 — 54	12.63	12.41	5.49	6.66
55 — 59	13.76	10.98	5.86	10.95
60 — 64	16.41	14.45	6.21	9.07
65 — 69	17.38	13.20	5.63	11.87
70 — 74	18.38	16.10	10.56	11.07
75+	13.03	10.66	8.50	9.49
<i>Females:</i>				
5 — 9	4.12	11.16	5.10	7.17
10 — 14	6.96	13.72	7.72	8.97
15 — 19	9.21	18.31	15.04	12.95
20 — 24	11.51	21.85	13.49	14.74
25 — 29	10.16	15.02	10.53	13.92
30 — 34	9.62	16.55	7.79	8.67
35 — 39	8.47	14.73	6.27	6.84
40 — 44	8.31	13.27	5.70	6.29
45 — 49	6.74	8.82	4.19	7.36
50 — 54	8.12	9.04	5.45	4.04
55 — 59	8.48	8.06	5.12	4.81
60 — 64	13.26	6.18	5.20	4.83
65 — 69	12.80	11.58	7.64	5.00
70 — 74	15.23	7.06	6.28	8.50
75+	14.73	4.82	7.06	5.75

Source: Computed from Census of 1920, Table 2, Census of 1925, Table 4, Census of 1930, Table 8, Census of 1935, Table 7, and Census of 1940, Table 9.

will be gained by consideration of in-migration and out-migration separately. The analysis of this section is based on the limited data available from birth-place statistics.

It seems obvious that there is no necessary negative co-variation between in-migration and out-migration. In other words, a prefecture may both lose many migrants and also attract other classes of in-migrants, so that its net migration rate would be rather small. On the other hand, a prefecture may have a high rate of net migration, and yet in reality attract (or lose) only a small proportion of migrants. This section examines whether the streams of migration to the eastern region significantly affect the overall migration pattern and, more important, whether the temporal pattern of such an impact indicated a convergence of migration rates by region.

In 1920, there was a direct correspondence between lifetime in-migration and out-migration. For instance, Taipei attracted roughly 20,000 in-migrants and lost about 16,000. This movement contributed 15 percent of the total out-flow and 19 percent of the total in-flow migration for the country as a whole (Table 3). Taitung, as another example, ranked second highest in in-migration rate: no fewer than 13 percent of its population was born outside the prefecture, but its share of the total in-flow was only 4 percent.

After 1920, however, the contribution of each prefecture to either out-migration or in-migration was more or less evenly distributed among all of them. Although Taipei still shared roughly about 15 percent of both in-flow and out-flow movement, it declined from 15 percent to 14 percent in out-migration and from 16 percent to 14 percent in in-migration during the period 1930-40.

Similarly, although Hsinchu lost most out-migrants in 1920 (with 50 percent of out-migrants born in this prefecture), its proportion declined to 42 percent in 1940. Its proportion of in-migrants also fell, from 8 percent in 1920 to 2 percent in 1940. Thus, Hsinchu had the largest net losses of any prefecture.

The decline of Taichung was even more drastic in this period. In 1920, it was the number one prefecture which absorbed 26 percent of the total in-migrant population, but in 1940 its share decreased to 13 percent, with a loss of rank from first to fifth. Its out-migrant share,

TABLE 3
Percentage Distribution by Prefecture of Lifetime
In-Migrants and Out-Migrants, Taiwan, 1920, 1930 and 1940

Prefecture	1920		1930		1940	
	Out-Migrants %	In-Migrants %	Out-Migrants %	In-Migrants %	Out-Migrants %	In-Migrants %
Taipei	16	19	15	16	14	15
Hsinchu	50	8	49	4	42	2
Taichung	11	26	9	22	13	13
Tainan	12	18	11	17	17	15
Kaoshiung	9	13	5	22	5	28
Taitung	1	4	2	4	0	8
Hualien	1	12	1	14	1	19
Penghu	—	—	8	1	8	0
Total	100	100	100	100	100	100
Mean	14	14	12	12	12	12
Standard Deviation	10.6	5.7	9.5	7.2	9.0	7.0

Source: Computed from Census of 1920, Table 17, 89-172; Census of 1930, Table 30 of each prefectural volume; and Census of 1940, Table 7, 28-31.

on the other hand, increased from 11 percent in 1920 to 13 percent in 1940.

The decline of Tainan was less drastic than that of Taichung. As one of the earliest settled prefectures, it might have passed its era of tremendous losses in population before 1920-40. While its out-migrant share increased slightly from 12 percent to 17 percent, its in-migrant share only changed from 18 percent in 1920 to 15 percent in 1940.

The picture of population movement to and from Kaoshiung was a clear contrast to Taichung. This prefecture increased its share of in-migrants rather sharply in this period from 13 percent in 1920 to 28 percent in 1940, ranking first among all the prefectures at the terminal date.

Taitung, Hualien and Penghu were small prefectures in terms of their population size. Yet, their contribution to the population move-

ment was not negligible. With less than 4 percent of Tainan's population, Penghu accounted for 8 percent of the total out-migrants and gained only 1 percent of the in-migrants. Taitung and Hualien, on the other hand contributed only 1 percent of the out-migrants, yet their share of in-migrants was steadily increasing. For Taitung, the share rose from 4 percent in 1920 to 8 percent in 1940.

From Table 3, certain conclusions can be drawn. The dominance of out-migration from Hsinchu and of in-migration to Taichung gradually changed during 1920-40. Small prefectures like Taitung and Hualien began to increase their shares of in-migrants, whereas the percentage going to large prefectures like Taipei and Tainan decreased.

The table also shows that the average deviation of the distributions of proportions of out-migrants decreased from 10.6 percent in 1920 to 9.0 in 1940. For in-migrants, the tendency towards convergence is less clear-cut, due to the fact that Penghu became a separate prefecture after 1920. However, between 1930 and 1940 the average deviation decreased only from 7.2 to 7.0 percent. Therefore, one can conclude that the pattern of out-migration was more consistent over this period than that of in-migration.

The observation is further supported by the rank-order correlations between prefectural shares of in-migrants and out-migrants. In 1920, a Kendall coefficient (τ) of 0.33 indicated a slight tendency for a prefecture with a large in-migration also to have a large out-migration. Gradually, this positive relation disappeared, with a coefficient of 0.0 in 1930, and this was reversed, with one of -0.11 in 1940. This change in rank-order correlations seems to indicate a tendency towards regional convergence. It implies that the prefectures, such as Kaoshiung, Taitung, and Hualien, that were unattractive in the beginning of the century, became more so during this period. Large numbers of people moved into these newly emerged prefectures and comparatively few moved out. Consequently, the dominance of such prefectures as Taipei or Taichung gradually disappeared, but the prefectural shares of out-migrants converged much more rapidly than those of in-migrants.

SELECTIVITY OF MIGRATION

Migration patterns depend not only on regional characteristics, but also on how migrants differ from non-migrants — that is, to what extent the migrants select themselves from the general population. If one can determine precisely how and in what respect migrants are different from non-migrants, it is likely that one can conclude how the impact of population migration is to the advantage of the receiving areas.

From a large number of studies bearing on migration differentials, Thomas (1938: 11) observed that ‘the one generalization about migration differentials is the following: there is an excess of adolescents and young adults among migrants’. She also pointed out the difficulties involved in comparing data based on different ‘indirect’ calculations. Since 1938, however, a body of reasonably comparable data has been accumulated, and the indirect measures seem to yield fairly satisfactory results.

TABLE 4
Rates of Lifetime Migration by Age and Sex, Native
Population of Taiwan, 1920 and 1930
(Per thousand)

Age Groups	1920		1930	
	Males	Females	Males	Females
0 — 9	10.8	12.1	18.1	20.8
10 — 14	19.3	20.8	40.6	39.3
15 — 19	37.4	31.9	65.2	56.2
20 — 24	47.2	39.7	74.3	63.9
25 — 29	47.9	38.1	73.7	60.5
30 — 39	40.0	33.8	61.6	50.6
40 — 49	34.6	33.8	47.8	45.6
50 — 59	31.2	33.7	41.1	45.1
60 — 69	31.7	36.1	35.0	40.4
70 — 79	—	—	31.5	36.3
Total	31.0	27.5	45.2	43.1

Sources: Computed from Census of 1920, Table 17, 89-172, and Census of 1930, Table 31 of each prefectural volume.

In Taiwan, place-of-birth data and the CSR estimates yield both direct and indirect measures of migration, from which the age-sex pattern of both lifetime migration and intercensal migration can be calculated.

From the place-of-birth data in 1920 and 1930, the lifetime migration rate was computed for each age-sex group (Table 4). It is noted that the distribution of the migration rates was unimodal, with the peak roughly at ages 20-29. Generally the propensity to migrate was quite low in the age group 0-9. In 1920, the rate was 11 per thousand for males and 12 per thousand for females. In 1930, it was somewhat higher; 18 per thousand for males and 21 per thousand for females. After that, the rate rose quite rapidly, and reached its peak at ages 25-29 for 1920 males, 20-24 for 1920 females, and in 1930 at ages 20-24 for both sexes.

The peak was much higher for males than for females, and for the 1930 population than for 1920. In 1920, the peak of the distribution was 49 per thousand for males and 40 per thousand for females, but reached 74 per thousand for males and 63 per thousand for females in 1930. The curves declined rapidly after the peak ages. For 1920 males, the level fell to 31 per thousand at ages 50-59 to 36 per thousand at age 60 and over. In 1930, the curve of migration rates declined continuously after the modal age group 20-24, and at age group 70 and over, the rate was 31 per thousand for males and 36 per thousand for females.

This distribution of migration rates needs explanation. Why, at the earlier date, did the older age groups show a higher propensity to migrate? However, before we attempt to do so, we may have to know whether such a pattern was something unique in the lifetime migration data. Could we observe the same pattern from the CSR estimates of migration?

Estimates of intercensal migration are the result of applying the CSR method to the age-distribution data of each prefecture. The intercensal displacement due to migration is obtained by summing the positive inter-prefectural net migration for each age cohort, which in a closed population is equal to the negative sum. The sum is then divided by the average size of the cohort and expressed per 1,000 to yield the

TABLE 5
Rates of Intercensal Migration by Age and Sex,
Native Population of Taiwan, 1920-40
(Per thousand)

Age At End Of Period	1920-25	1925-30	1930-35	1935-40
<i>Males:</i>				
5 - 9	3.9	10.8	4.5	6.2
10 - 14	5.9	11.8	8.4	13.1
15 - 19	9.7	15.7	17.4	33.5
20 - 24	11.7	24.9	13.6	27.2
25 - 29	10.4	20.9	11.4	21.6
30 - 34	9.1	16.6	9.0	15.3
35 - 39	9.2	14.6	6.6	12.1
40 - 44	9.9	14.3	5.8	10.1
45 - 49	11.2	10.6	5.2	9.6
50 - 54	12.6	12.4	5.5	6.7
55 - 59	13.8	11.0	5.9	10.9
60 - 64	16.4	14.4	6.2	9.1
65 - 69	17.4	13.2	5.6	11.9
70 - 74	18.4	16.1	10.6	11.1
75+	13.0	10.7	8.5	9.5
<i>Females:</i>				
5 - 9	4.1	11.2	5.1	7.2
10 - 14	7.0	13.7	7.7	9.0
15 - 19	9.2	18.3	15.0	12.9
20 - 24	11.5	21.9	13.5	14.7
25 - 29	10.2	15.0	10.5	13.9
30 - 34	9.6	16.5	7.8	8.7
35 - 39	8.5	14.7	6.3	6.8
40 - 44	8.3	13.3	5.7	6.3
45 - 49	6.7	8.8	4.2	7.4
50 - 54	8.1	9.0	5.4	4.0
55 - 59	8.5	8.1	5.1	4.8
60 - 64	13.3	6.2	5.2	4.8
65 - 69	12.8	11.6	7.6	5.0
70 - 74	15.2	7.1	6.9	8.5
75+	14.7	4.8	7.1	5.7

Source: Computer from Census of 1920, Table 2, Census of 1925, Table 4, Census of 1930, Table 8, Census of 1935, Table 7, and Census of 1940, Table 9.

intercensal rate of displacement (Eldridge and Thomas, 1964: 75-78). Applying this formula to the Taiwanese data yields a series of intercensal displacement rates from 1920-25 to 1935-40 (Table 5).

Note that the distribution of the male migration rates in 1920-25 was bimodal, with two peaks at ages 20-24 and much higher one at ages 70-74. During 1925-30, the distribution of migration rates was much closer to the expected pattern, with a peak at ages 20-24 and thereafter a steady decline, followed by minor fluctuations, and a slight rise at ages 75 and over. This second peak, however, was much lower than the first one. During 1930-35, when the rate of migration was lower than most of the other periods, the peak occurred as early as ages 15-19, thereafter declining to a trough at ages 70-74, with a second peak so low that perhaps we should not really call it one. In 1930-40, the distribution of migration rates was clearly unimodal: rates rose quite sharply from ages 5-9 to ages 15-19, then declined sharply to ages 50-54, fluctuating at slightly higher rates at the older ages.

The pattern for females was similar to that which was described for males. A bimodal distribution was clear in 1920-25. In 1925-30 the bimodality disappeared; the single peak was at ages 20-24. In 1930-35 data, the peak occurred at ages 15-19, and in 1935-40 the peak again at ages 20-24.

In short, several conclusions can be drawn: First, the Taiwanese data showed that the highest rates of both male and female migration were likely to occur at ages 20-24. Secondly, in the earlier periods the population in older age groups had a high propensity to migrate, yet the bimodal distribution disappeared in the latter periods. Thirdly, male migration rates were generally higher than female, particularly among young adults.

As the young and the males dominate in migration, their impact on socio-economic development of the receiving regions is discernible. Since the trend of Taiwanese migration was a movement toward the eastern part of the island, it certainly was a societal gain for these relatively underdeveloped prefectures to receive the manpower assets — the young and the males.

Along with the eastward migration, there was a decline in regional

disparity. Since migrants were self-selected from the most productive age classes, the in-migration to the relatively under-developed regions acted as an adjustment to stimulate economic growth there. In this sense, the overall societal development can be reinforced, and a more drastic structural change involved in industrialization and urbanization is undertaken.

TABLE 6
Male Non-Agricultural Proportion and Proportion Urban of
Total Population by Prefecture, 1920, 1930 and 1940

Prefecture	1920	1930	1940
<i>Non-Agricultural Proportion:</i>			
Taipei	47.1	48.9	57.5
Hsinchu	27.8	26.3	30.7
Taichung	25.1	26.5	32.3
Tainan	23.5	26.9	31.3
Kaoshiung	21.4	23.1	34.5
Taitung	10.8	12.7	20.1
Hualien	22.0	27.9	35.9
Penghu	—	26.6	26.6
Taiwan	28.7	30.0	36.7
Rel. Mean Deviation	29.4	24.5	22.6
<i>Urban Proportion:</i>			
Taipei	36.0	39.0	59.0
Hsinchu	16.0	19.5	28.6
Taichung	27.6	27.6	45.8
Tainan	24.2	24.6	35.6
Kaoshiung	20.3	20.0	34.9
Taitung	17.7	14.8	21.1
Hualien	8.5	19.0	45.6
Penghu	—	32.4	36.4
Taiwan	25.1	26.2	41.0
Rel. Mean Deviation	29.7	25.5	23.1

Source: Computed from Census of 1920, Table 2, 32-89, Table 6, 93-114; Census of 1930, Tables 1 and 23 of each prefectural volume; and Census of 1940, Table 1, 3-17, Table 16, 62-63.

Two indicators were used to delineate the pattern of regional convergence: the proportion of male labour force in non-agricultural industry and the proportion of total population in urban places, indicating the change in industrialization and urbanization, respectively. To measure the convergence of these indicators, the relative mean deviation of prefectures' values was compared with the corresponding national value. That is, absolute deviation was summed, disregarding signs, and the sum was divided by the number of prefectures to yield the mean deviation; and then, this absolute deviation was in turn divided by the national average to give the relative mean deviation expressed as a percentage.

Table 6 shows the proportions non-agricultural and urban in each prefecture. If the non-agricultural proportion is taken as an indicator of industrialization, Taipei always led the rest of the island. Its non-agricultural proportion increased from 47 percent in 1920 to 57 percent in 1940. The non-agricultural proportion in Hsinchu was relatively high in 1920, when it ranked third among prefectures (28 percent), but it did not increase much thereafter, and fell to sixth rank at the end of the period. The non-agricultural proportion in Taichung increased, but at more or less the same rate as the increase in the country's total labour force, so that this area consistently ranked fourth. Tainan ranked fifth in 1920, showed a slight upward trend in 1930, and then it fell back again to fifth rank. Kaoshiung, sluggish in its industrialization before 1930, showed a sharp rise in the following decade, from 23 percent in 1930 to 34 percent in 1940. The two eastern prefectures seemed to show a clear pattern of industrialization. The non-agricultural proportion in Taitung increased steadily from 11 percent in 1920 to 13 percent in 1930 and 20 percent in 1940, and in Hualien from 22 percent in 1920 to 28 percent in 1930 and 36 percent in 1940. In fact, Hualien ranked second in industry at the end of the period.

As the industrialization in the eastern prefectures increased faster than the national average, all prefectures became closer and closer to the national average. The prefectures' average deviation from the national level of non-agricultural proportion decreased from 29 percent in 1920 to 23 percent in 1940. Thus, the regional pattern of industrialization had a tendency to converge.

The regional pattern of urbanization paralleled that of industrialization. Taipei always ranked first in the proportion of population in the

urban places. It increased from 36 percent in 1925 to 59 percent in 1940. Hsinchu, though contiguous to Taipei did not have a high urban proportion (only 16 percent in 1920 and 29 percent in 1940), ranking next to the last throughout the period. Comparatively, Taichung's urban proportion was high, always ranking either second or third. Although the urban proportion in Tainan increased from 24 percent in 1925 to 36 percent in 1940, its rank position fell to sixth by the end of the period. Kaoshiung's rank was consistently fourth or fifth. (21 percent in 1925 and 36 percent in 1940.) The urban proportion in the two eastern prefectures was among the lowest. However, during 1930-40, while Taitung remained at the lowest rank, Hualien's urban proportion increased dramatically from 9 percent to 45 percent and the prefecture rose to third place. As with industrialization series, the data on urban growth also showed a clear regional convergence. The relative mean deviation decreased from 30 percent in 1925 to 25 percent in 1930 and to 23 percent in 1940.

SUMMARY AND CONCLUSION

This study has dealt with the historical pattern of interprefectural migration in Taiwan. The series of Census Survival Ratios (CSR) are smooth enough to suggest that they can be used to calculate the estimates of quinquennial interprefectural migration from 1920 to 1940. The two relatively underdeveloped eastern prefectures, Taitung and Hualien, attracted many in-migrants, while Hsinchu and Penghu on the west coast lost more than other prefectures. Taichung changed from a gaining to a losing prefecture, and Kaoshiung from a losing to a gaining prefecture. In the 1930's, the economic depression seemed to have a great effect on the migration pattern of two prefectures, Taipei and Tainan. Taipei was a gaining prefecture except for 1930-34, while Tainan, a generally losing prefecture, gained during the depression period.

The place-of-birth data from 1920 to 1940 were used to analyze migration streams. From both lifetime in-migration and out-migration separately, the conclusion was that during 1920-40 the percentage shares for prefectures became more evenly distributed. The pattern of out-migration was more consistent over time than that of in-migration.

Out-migration did not change much; for instance, Hsinchu retained the largest share of out-migrants throughout the period. But, the pattern of in-migration changed considerably. Taichung, for instance, which ranked first in attracting in-migrants in 1920, fell to fifth in 1940.

According to both place-of-birth data and census-survival-ratio estimates, the highest propensity to migrate was at ages 20-24 (at the end of five-year intercensal periods). Although in the earlier years elderly persons may have had very high migration propensities, this bimodal pattern disappeared after 1925. Male migration rates were generally higher than female, especially among young adults.

The temporal pattern of regional characteristics suggests that during 1920-40 migration flows decreased the polarization between developed and undeveloped regions. The structural changes in the Taiwanese economy, as measured by industrialization and urbanization, were related to this regional convergence: the relatively underdeveloped regions had a higher rate of growth. The flows of migration from developed to underdeveloped regions probably accelerated the process, since the majority of migrants were economically more productive than the average population.

In short, several conclusions can be reached from our analysis: first, the overall regional pattern of Taiwanese migration is an eastward movement, from the populous, developed region to the unpopulous, underdeveloped regions. Second, the migration flows to the eastern prefectures have occurred in an accelerating speed and quantity during this period, so that their proportional share of in-migration increased dramatically, and a clear regional convergence of population movement was shown. Third, as the young and the males are the predominant forces of migration, their impact on socio-economic development of the eastern region seemed to be discernible. As the eastern regions developed faster than the national average, all prefectures became closer and closer to the national average and thus regional disparity declined.

Our findings contradict some previous studies and support others. The Taiwanese economy during this period 1920-40 can hardly be characterized as mature and developed (with a non-agricultural proportion of roughly 35 percent), yet regional convergence was observed even in this initial stage of economic development. Thus, a question can be raised: is there a systematic relation between national development and regional inequality?

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OUT-MIGRATION FROM URBAN AREAS: A Case Study of an Indian Town

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In the study of internal migration, four types of migration streams are generally discerned. These are (a) rural-rural, (b) rural-urban, (c) urban-urban and (d) urban-rural. Whereas rural-urban migration and its consequences on the communities of origin and destination have been widely studied in view of highly accelerated growth of urbanization round the world during the present century, little attention has been paid to the study of causes and consequences of urban-urban migration which sometimes is quite substantial and important. Such migration streams have far-reaching consequences for those communities which have been suffering from chronic out-migration over long periods of time. By taking the case of a chronically out-migrating town from north-west India, this paper examines the incidence and pattern of out-migration over the past 10 years, and analyses the causes and consequences of such out-migration.

There seems to be general agreement that three key variables: employment, income, and rapid population growth determine the extent

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and pattern of migration flows. Migrants flow from areas where employment opportunities are stagnant, where income is low and where the rate of population growth is high. Conversely, they are attracted to areas of new industrial development, regions of higher per capita income and areas where the disparity between birth and death rates is less (Bogue, 1966: 163). However, in areas of chronic out-migration, the age distribution of the population undergoes a shift showing a depression in the working age groups. This lowers the birth rate of the community and since there are more young children or aged people, the death rate is comparatively high (Beale, 1969: 91-99). Thus, many a time the chronically out-migrating communities have lower growth rates than the communities of destination.

CONCEPT OF OUT-MIGRATING TOWNS

Any town which shows a lower growth rate between two time periods (usually two consecutive census dates) than its natural increase rate loses population due to out-migration and is regarded as an 'out-migrating town'. Unfortunately, in India, there are no reliable data on birth and death rates for each individual town and it is not possible to obtain their actual natural increase rate. In view of this, out-migrating towns have been defined as those towns that have (i) an actual decline in their population in the subsequent census as compared to the previous one, or (ii) a positive growth rate but not commensurate with the natural increase rate. For the decade 1951-61 when the overall growth rate in the country was 20.5 percent for the decade, the lower limit for the natural growth rate in out-migrating towns was assumed to be 10 percent and all towns showing a growth rate of less than 10 percent were considered as out-migrating towns (Premi, 1972: 23-29). However, sometimes the decline in actual population between two time periods or a slow positive growth rate in a particular town can be due to certain specific causes. For example, Simla lost population between 1951 and 1961 because during this period offices of the Punjab Gov-

ernment and the Punjab High Court were transferred from Simla to Chandigarh and some of the offices of the Central Government were also moved. Again there are certain towns which, at the time of a particular census had huge construction projects like river dams, power houses etc. in full swing but which had been completed before the next census. In such cases most of the construction workers migrate to other places after the completion of the project causing a sudden decline in the population.

In view of these considerations we have developed the concept of 'chronically out-migrating towns'. These are those towns that have been in continuous existence at least for the past 70 years but have either shown a lower population in 1971 as compared to that in 1901, or the 1901-71 growth rate has been less than 50 percent.¹ The population of most of these towns has fluctuated over the past 70 years, sometimes increasing a little during a particular decade and at other times declining in the subsequent decade.

CHARACTERISTICS OF OUT-MIGRATING TOWNS

An analysis of the secondary data on out-migrating towns of India indicates that such towns are generally small, with population less than 20,000. They are characterized by a depression in the age pyramid in the age-group 20-49, by a comparatively lower sex ratio,² a higher participation of females in economic activity and a lower literacy rate (Premi, 1972). Furthermore, such areas commonly possess, in varying degrees, one or more of the following characteristics: a narrow range of economic activity, declining basic industries, unskilled or unadaptive labour force and decayed or inefficient infrastructure.

The towns which are found to be chronically out-migrating were by and large located in the past at particular places to fulfill certain functions relevant at that time. Those functions have generally lost their importance in the present-day economy and the towns somehow could not adapt themselves to the new requirements.

From the above account a question arises: should the out-migrating towns, particularly the chronic ones, be allowed to stagnate and eventually disappear, or should attempts be made to revitalize their economy by a policy of bringing in work instead of moving the workers out of the labour-surplus areas? This question becomes more pertinent in the light of the goal of balanced regional development as professed in India's Five Year Plans (Planning Commission, n.d.: 398) and from the viewpoint of utilizing the available infrastructure of these out-migrating towns more efficiently. Further, it has been pleaded that backward regions should be industrialized rather than that more advantageous regions be permitted to depopulate the depressed regions (Bogue, 1966: 164). To answer the above question it is necessary first to understand the nature and determinants of out-migration from such communities and their over-all socio-economic structure. Natural endowments, environmental conditions, and social and political organization of the community, availability of surplus for investment and local entrepreneurship will be the other determinants of the future course of action in such communities.

SELECTION OF THE STUDY AREA

In order to study the nature and determinants of out-migration we have selected four out-migrating towns from the Haryana and Punjab region of India. The 1971 population of two of these towns was lower than their 1901 population and the other two show a growth rate of 4.3 percent and 15.1 percent respectively over the past 70 years against an overall growth rate of more than 90 percent in the region. As a contrast, two heavily in-migrating towns of nearly similar population size have also been taken from the same region. However, this paper presents the results of the data collected for one of the out-migrating towns, namely, Sadaura.

THE SETTING

The town of Sadaura situated in Haryana State at the outskirts of Shiwalik range (30° 23' N and 77° 16' E) is believed to be of great antiquity, dating back to the time of Mahmud of Ghazani. The Ain-i-Akbari (1596) mentions the 'mahal'³ of Sadaura. Towards the end of the nineteenth century, the town had well-developed industry of coarse cloth weaving and local trade in country products. It had a population of 11,167 within its municipal limits at the census conducted in 1875.

Before the partition of the country in 1947, the town had roughly 1,000 hand and power looms. It also had a printing press and a weekly newspaper. The wooden letter work was highly prominent. With the migration of Muslims from the town at the time of partition, the cottage and small industries of the town suffered adversely.

The population of the town, 11,167 in 1875, declined monotonically to 7,630 persons by 1921. During the past 50 years the population has fluctuated, and in 1971 it stood at 8,971 persons. Looking at the history of population growth of this town (Table 1) one finds that the town has been stagnating.

TABLE 1
History of Population Growth of Sadaura

Year	Population	Males	Females	Growth Rate
1875	11,167	5,811	5,356	—
1881	10,794	N.A.	N.A.	−3.34
1891	10,445	5,308	5,137	−3.23
1901	9,812	5,140	4,672	−6.06
1911	7,774	4,107	3,667	−20.77
1921	7,630	4,058	3,572	−1.85
1931	7,769	4,171	3,598	1.82
1941	8,815	4,747	4,068	13.46
1951	7,566	3,991	3,575	−14.17
1961	7,775	4,007	3,768	2.76
1971	8,971	4,641	4,330	15.38
1973 Dec. (estimated)	9,072	—	—	1.12

The sub-mountainous physical features and the seasonal rivulet surrounding the town make the area less amenable to intensive cultivation. Secondly, limited transportation facilities available to the town with the nearest railway station at a distance of 26 km and only two road routes from south-west and south-east to north and north-west severely limit the economic activity in the town. The town, however, acts as a trading centre for its hinterland collecting produce of the neighbouring villages for consumption by its population and selling those commodities which the villagers require.

According to the 1971 census, Sadaura's 8,971 persons were living in 1,718 households. In addition, 195 households had come up between the date of the census and the date of the survey. A 25 percent sample of all the households was selected by simple random sampling method to collect data regarding the incidence and pattern of out-migration from the community over the past 10 years and on the related characteristics of the out-migrants and the members of the families who live in the out-migrating towns. The data for the inquiry were collected during December 1973 – January 1974.

THE RESULTS

The survey reveals that out of a total of 446 households surveyed, 39 households with a population of 112 persons have become extinct since the house-listing operations of the 1971 census (April-June 1970) due to out-migration of all members.⁴ In the remaining 407 households, 2,259 persons were living at the time of the survey and 281 members of these households were found to have migrated to other areas. Also, over the last 10 years, a total of 172 persons migrated into the community due to transfer from other places and marriage, etc. leaving a net balance of 221 out-migrants at the end of the period. Taking the end period population of the community as base, we find that the net out-migration rate in the community over the 10 year period is 13.6 percent.

Since the information about the extinct households due to out-migration was collected from the neighbours, they could not give enough details about the out-migrants and it is not possible to take them into account in describing the characteristics of the out-migrants and pattern of out-migration. The following discussion is, therefore, based on 281 out-migrants whose close relatives are still living in the town.

A COMPARATIVE ANALYSIS OF
DEMOGRAPHIC CHARACTERISTICS
OF OUT-MIGRANTS AND RESIDENT
POPULATION

A comparative study of the sex ratio, age structure, marital status and educational attainment of the sampled resident population and the out-migrants indicates that while the sex ratio in the resident population is 105, it is 118 in the out-migrant population. When we compare the age structure of the two groups (Table 2), we find that whereas, in the resident population, more than half (53.2 percent males and

TABLE 2
Sex-Age Distribution and Sex Ratio in Each Age Group of
Residents and Out-Migrants in the Sampled Population of Sadaura

Age Group 1	Resident Population			Out-Migrants		
	Males 2	Females 3	Sex Ratio 4	Males 5	Females 6	Sex Ratio 7
Below 20	53.15	50.73	110	10.53	17.83	70
20 – 34	16.91	17.73	101	65.13	76.74	100
35 – 49	12.08	17.00	75	19.08	3.10	725
50 – 59	7.51	6.64	119	3.95	1.55	300
60+	10.35	7.91	138	1.31	0.78	200
Total	100.00	100.00	105	100.00	100.00	118
N	1,159	1,100		152	129	

50.7 percent females) are below the age of 20, the proportion of out-migrants below 20 years is 13.9 percent only (10.5 percent males and 17.8 percent females). Similarly, the proportion of persons above the age of 50 in the resident population is 16.2 percent compared to 3.9 percent in the out-migrant population. These data clearly reflect sex-age selectivity of the out-migrants from the community of origin.

Table 3 gives a comparative picture of marital status of the resident population and out-migrants. We note from this table that whereas more than half (56.7 percent) of the sampled residents of Sadaura were unmarried their proportion in the out-migrants was only 20.6 percent. The rest of the people among out-migrants were married.

As most of the out-migrants in our sample are adults, a comparison of the educational attainment of the resident and out-migrated population above the age of 20 (Table 4) indicates that the out-migrants have a much higher educational level than the resident population implying that whereas the community is spending its meagre resources on providing education and other training facilities to the young persons they, instead of letting their own community avail the benefit of their services, migrate to other areas for better livelihood. The survey indicates that 61.7 percent of the workers are engaged in unskilled work; 21.1 percent are shopkeepers and hawkers, etc.; 6.9 percent are professional and supervisory workers; 5.6 percent are skilled and semi-skilled workers and the rest are clerical workers.

TABLE 3
Marital Status of Residents and Out-Migrant Sampled
Population, Sadaura (in percentages)

Marital Status	Resident Population			Out-Migrants		
	Males	Females	Total	Males	Females	Total
Never married	61.86	51.18	56.66	35.53	3.10	20.64
Married	34.43	42.18	38.20	64.47	96.90	79.36
Widowed	3.71	6.64	5.14	—	—	—
Total	100.00	100.00	100.00	100.00	100.00	100.00
N	1,159	1,100	2,259	152	129	281

TABLE 4
Distribution of Resident and Out-Migrant Population of
Sadaura Aged 20 and Above According to Other
Educational Attainment (in percentages)

Educational Level 1	Resident Population			Out-Migrants		
	Males 2	Females 3	Total 4	Males 5	Females 6	Total 7
Illiterate	37.20	63.47	50.32	4.41	30.19	15.70
Literate but less than primary	8.10	6.64	7.37	0.74	3.77	2.07
Primary pass	12.15	11.99	12.07	5.15	16.98	10.33
Junior high school	15.65	8.49	12.07	15.44	23.21	14.46
High/Higher Secondary School	21.55	7.93	14.75	55.15	33.02	45.45
Graduate	3.68	1.48	2.58	13.24	2.83	8.68
Post-graduate	1.29	0.0	0.65	0.88	0.0	3.31
Non-mentioned	0.37	0.0	0.13	—	—	—
Total	99.99	100.00	99.99	100.00	100.00	100.00
N	543	542	1,085	136	106	242

CAUSES OF OUT-MIGRATION

In the case of females, marriage accounted for 96.9 percent out-migration. This very high proportion of marriage out-migration is due to the system of exogamy in marriage. This fact is also reflected from the data on migrants into the community. Among the 172 migrants to the town, 72.1 percent were females and a large majority of them came to the town through marriage with townspeople.

Among males, economic factors (service, to earn riches, and to look after landed property) were mostly responsible for out-migration and

accounted for 91.4 percent of the migrants. A little less than 4 percent migrants went outside the town for the specific purpose of higher studies. The rest had migrated for miscellaneous reasons.

Among those out-migrants who left the community for economic reasons during the past 10 years, 15.4 percent have gone to other cities and towns in the district (mainly the two industrial towns of Jagadhari and Yamunanagar), 14.0 percent have gone to other cities in the State, and 36.8 percent have gone to cities like Delhi, Chandigarh, Ludhiana, Amritsar and some other metropolitan cities of India. However, about one-eighth of the migrants went to rural areas of the State. This shows that if people are not able to get jobs in small towns, they often go to rural areas also where some living is assured. This is particularly true in those cases where people have agricultural property. The above analysis, however, reflects that out-migration from Sadaura due to economic reasons is mainly directed towards industrial towns and big cities.

According to the 1971 census, the 'gainful employment' rate in the town comes to 23.7 percent. Among workers the proportion of persons engaged in primary production comes to 31.3 percent. In the 1961 census, this proportion was 22.8 percent. The survey reveals that of the 407 sample households 154 households (37.8 percent) possess cultivated land, wholly or partly owned by them. This data clearly reflects increased dependence on agriculture in the town and the existence of a narrow range of economic activity. Therefore, people who do not have attachment to agricultural land and who find it difficult to earn their livelihood in the community by other means out-migrate to places where better job opportunities exist.

CONSEQUENCES OF OUT-MIGRATION ON THE COMMUNITY

In the study of consequences of migration, demographers are often interested in sex and age differentials in order to observe the effect of migration on the sex-age structure at the place of origin, the place of

TABLE 5
Trend in the Sex Ratio of Sadaura, Urban Population
of Ambala District and Urban Population of Haryana State
Living in Places With Population Less Than 20,000

Year	Sadaura	Ambala District	Haryana Towns With Population Less Than 20,000
1901	110	134	106
1911	112	148	112
1921	114	144	117
1931	116	143	120
1941	117	147	118
1951	112	133	116
1961	106	128	116
1971	107	165	115

destination, or both. In our study we have already noticed the sex-age selectivity in out-migration from the community. As a consequence of the same, the sex ratio in the town is found to be lower than that in the urban population of the district or the urban population of the state even when confined to places with population less than 20,000 (Table 5).

The resultant sex-age structure of the population of Sadaura has lowered its 'gainful employment' rate to 23.7 percent in the 1971 census in contrast to 26.6 percent in the urban population of the district. On the other hand, the proportion of female workers among total workers in the community is found to be 3.2 percent, which is slightly higher than the corresponding proportion in the urban population of the district (2.8 percent). In the sampled population the proportion of female workers to all workers was 3.8 percent.

In the absence of reliable information on age composition of the population for each city/town, it is not feasible to build reliable estimates of 'dependency ratio' in the usual sense. If we define the dependency ratio as the number of non-workers per 100 workers, we find that it was 309 in 1961 which increased to 321 in 1971 (a major part of increase in dependency burden from 1961 to 1971 is probably due to the change in the definition of workers). In contrast to this, the dependency ratio in 1971 in the urban areas of the district works out to 276 which is comparatively much lower. This shows that due to

the distorted age distribution each worker in the town has to support a larger number of non-workers than he does in other urban areas of the district.

It has been indicated earlier that people with higher educational attainment, particularly those who do not have any interest, or only marginal interest, in land out-migrate to areas of better economic opportunities. This outflow of qualified manpower leaves the region poorer in developmental potential and the residual infrastructure works as a constant barrier to the growth of a secondary and tertiary sector in the community. As a result of this process, the dependence on agriculture increases more and more. In the case of Sadaura, it is observed that except for the construction of a cinema, no development has taken place in the secondary sector during the past decade. Unless some concrete steps are taken to revitalize the economy of the town through outside efforts, it is feared that the community would continue to lose its talent year after year and would continue to decay as it has done over the past century or so.

The survey data indicate that among the 152 male out-migrants 98 were married. Among them only 48 were living with their families at the place of out-migration; in the remaining cases other members of the family of the out-migrant were living in Sadaura. In a society which is culturally bound by the joint family system and tradition, it is not the father or eldest brother who leaves in search of a job (such cases in our sample were 33 percent), but it is his younger sons and/or younger brothers who move out. In small places people do, by and large, have some interest in property, and often the house is ancestral or there is cultivated land nearby. If these younger brothers or sons move out of the houses along with their families, they have a constant fear that the property would be appropriated by others. Secondly, the older ladies, especially the wife and/or mother of the head of the household, feel that the wife of the out-migrant has the duty of providing them relief from family chores and should continue to help them. The out-migrant also feels that he owes some moral responsibility in providing comfort to his aging mother and other members of the family even at the cost of great inconvenience to himself. Thirdly, unless the out-migrant is properly settled in the place of destination and makes some housing arrangement, the elders in the family do not like to send the members of the out-migrant's family with him. These hypotheses relating to the

pattern of out-migration need to be tested through detailed inquiries of a socio-psychological nature.

NOTES

¹ The period of 70 years has been specified here because time series data for each town is only available from 1901 onwards. Secondly, a growth of less than 50 percent over a period of 70 years has been taken to demarcate only those towns as chronically out-migrating towns which have really stagnated over this time span.

² Sex ratio in this paper has been defined as males per 100 females.

³ 'Mahal' refers to the smallest revenue collection unit in the Indian system.

⁴ It was not possible to obtain exact information on the extinct households due to out-migration over the last 10 years since a relevant sampling frame was not available.

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MIGRATION AND URBAN GROWTH IN THAILAND: An Exploration of Inter-relations among Origin, Recency and Frequency of Moves

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INTRODUCTION

The rapid pace of urbanization and its significance for social and economic conditions in the less developed world emphasizes the need for consideration of the role of migration in the urbanization process and the relation between it and social, economic, and demographic development. Migration may well have a strong impact not only on the large metropolis and on smaller urban places to which migrants move, but also on the small, isolated villages which the migrants leave and to which a number of them return. Movement in both directions may serve as the catalyst needed to speed up modernization and economic development in the less developed world. But at the same time, heavy migration may also exacerbate the problems of urban places.

Between 1950 and 1970, the urban population of the less developed world is estimated to have more than doubled to 635 million persons, accounting for one-fourth of the less developed world's total

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population, in contrast to the 16 percent it represented at mid-century (United Nations, 1970). Yet this change is dwarfed by the projected increase of the urban population to 2.2 billion by the year 2000 — a number almost as great as the total population of the less developed world in 1970 and of the entire world in 1950. At the same time, the rural population will likely continue to experience substantial growth, and is estimated to increase from 1.9 billion in 1970 to 2.9 billion by the turn of the century.

Assuming that the projections for the year 2000 prove correct, 42.6 percent of the 5 billion persons living in what are now less developed regions will be in urban places, and a considerable portion of them will be concentrated in large cities. The number of cities in the less developed world with one million or more persons will increase between 1970 and 1985, according to United Nations estimates, from 79 to 147, and the proportion of total urban population living in such cities will grow from 29 to 37 percent (United Nations, 1969). This sharp growth in number and size of large cities and their increasingly dominant position in the total urban hierarchy argue strongly for particular research attention to such cities and to the role of migration in their growth.

The importance of migration to urban growth in the less developed world is evidenced in recent United Nations statistics showing the relative contributions of natural increase and of population transfers (defined as the combined effects of population gains or losses from rural to urban migration and rural to urban area reclassification) to urban and rural population growth (United Nations, 1972). In less developed regions as a whole, the rate of natural increase in 1960 was virtually identical for urban and rural places, 22.5 and 22.4 per 1,000 respectively. However, because they experienced a net population transfer of 23.0 per 1,000, urban places grew by 45.5 per 1,000. By contrast, the rural population of the less developed regions was growing at an annual rate of only 16.5 per 1,000 because the effect of their equally high natural increase was decreased by a negative population transfer of 5.9 per 1,000. Thus population transfers clearly constitute an important element in slowing down the overall rate of rural growth and in contributing substantially to the especially high rate of urban

growth. The data also emphasize the importance of natural increase as a component of urban growth. At the same time, the very high population reservoir in rural areas, coupled with the significant growth projected for this population, points to the ever-present threat of a significant upsurge in the exodus from rural to urban areas.

The United Nations projections suggest considerable variation among subregions of the world and specific countries with respect to levels and rates of urbanization and the role of migration in the urbanization process. Yet gross data of the kind prepared and analyzed by the United Nations as well as those sometimes available in the censuses of individual countries do not lend themselves to the type of intensive analysis needed to assess fully the role of migration and the urbanization process. In particular, insights are needed into such questions as: to what extent is rural-urban migration a factor in the urbanization process? Who are the migrants and how do they differ from the non-migrants? To what extent do individuals move about repeatedly in their efforts to adjust to their environment? How does the migration experience of the population in big cities differ from that of those in smaller urban places?

Because Thailand represents a country in which urbanization is assuming increasing importance and for which a growing body of survey and census data is becoming available, it lends itself well to an intensive study of the urbanization process and the role of migration in it. Analyses of the patterns of urbanization in Thailand between the 1947 and 1970 censuses (Goldstein, 1971; Goldstein, 1974) indicate that in those 23 years Thailand's urban population increased from 10 to 15 percent of the total population and the number of urban places containing 20,000 or more persons grew from 6 to 38. Thailand's urban growth rate is high, averaging about five percent a year, just above the average for the world's less developed regions. Yet, because the rural growth of three percent is considerably higher than that of the rest of the world, the speed of urbanization is not as marked as elsewhere. Particularly noteworthy in Thailand is the very rapid population growth of Greater Bangkok, which between 1947 and 1970 grew from just over 780,000 persons to about three million. Containing over half of all of Thailand's urban population, Greater Bangkok accounted

for almost two-thirds of all urban population growth in the country during the 1960 decade. Moreover, its population, 32 times that of Thailand's next largest city, makes its urban primacy one of the most striking in the world. Yet urban development has begun to permeate all regions of Thailand and has become an important factor in the complex process of national, social, and economic development. For this reason, this analysis will focus heavily on the differences in migration to Bangkok itself and to the smaller urban centers of Thailand. In particular, it will examine the extent of migration to urban places; the character of this movement as indexed by place of origin, recency of move, and frequency of moves; and the extent of age differentials between migrants and non-migrants as well as between migrants as defined by the various indices listed above.

SOURCES OF DATA

Until recently, the only statistics available for analysis of the national patterns of internal migration in Thailand have been those from the published data of the 1960 census and special tabulations obtained from a one percent sample tape (see, for example, Goldstein, 1973a; Goldstein, 1973b). Comparable data are just becoming available from the 1970 census.

Recognizing the problems inherent in census data and also realizing that data collected only once every 10 years introduces serious limitations for purposes of monitoring developments in a society undergoing an increasing pace of demographic change, in 1968 the Institute of Population Studies at Chulalongkorn University initiated a National Longitudinal Survey of Social, Economic, and Demographic Change in Thailand. This interview survey of a national sample of households in rural and urban Thailand began field operations in the Spring of 1969, when members of about 1,500 rural households were interviewed. In the second phase, undertaken a year later, a similar set of questions was administered to a sample of about 2,100 urban house-

holds. As far as feasible, the rural sample members were re-interviewed in 1972, and the urban sample in 1973. Replacement of those cases which could not be covered in the follow-up surveys serves to maintain the cross-sectional character of the samples in the later years. The interviews covered a wide range of demographic, social, economic, and health topics intended to provide insights into the direction and extent of attitudinal and behavioral changes in addition to the circumstances under which such changes occurred. (For a full discussion of the methodology of the Longitudinal Survey, see Prachuabmoh et al., 1971.)

The migration data to be examined in this report are restricted to those drawn from the first-round urban sample. For this sample, based on a three-stage selection process, a total of 2,115 households were chosen for interviews with 2,030 actually interviewed. These contained 13,486 persons. Within each household, whenever possible and appropriate, the male household head, his wife, and all other ever-married women under age 60 living in the households were interviewed. The overall response rate was high. Only four percent of the households could not be interviewed at all and in 16 percent, the heads of household could not be interviewed, usually because of temporary absence from home or unusual working hours. Such omitted persons may be atypical with respect to a number of variables explored by the Longitudinal Survey, including migration status. Thus the possibility of bias being introduced into the result because of differential exclusion needs to be borne in mind when interpreting survey findings.

An additional potential source of bias in the 1970 urban sample, which may have particular relevance for assessing the levels and selective character of migration, should be noted. Households living in temporary residential units were systematically excluded from the sample during the first urban round. Characteristically, these were the dwellings of construction workers who had set up shacks on or near construction sites for the duration of the job. Typically, they move from one site to the next as they go from one job to the next. Based on an assessment of those interviewed in households identified in the second urban round as living in temporary residences, it has been estimated that they represent only about one percent of the total sample. Since almost all persons in these households were migrants to

Bangkok, they would, of course, constitute a greater proportion of the migrant group, and especially of the recent migrant group. An estimate suggests that they probably equal about seven percent of all the migrants who came to Bangkok within the five years preceding the survey. Almost all of these temporary residents had very complicated migration histories; a number regarded themselves as seasonal migrants. Comparison of their characteristics with those of the five-year migrants included in this analysis suggests that the temporary residents are disproportionately concentrated among young adults, those whose marriage had been broken by divorce or separation, and those with four or less years of schooling. The possible bias introduced by the omission of this group and its unique composition must be recognized in the assessment of the migration patterns observed on the basis of the cases included in the first urban round. As with all social survey data, the additional problems associated with sample selection, response error, and data processing also argue in favor of a certain scepticism when interpreting the findings.

DEFINITIONS

For purposes of this analysis, the urban population refers to residents of those places designated as municipal areas by the Thai government. In all, there are 119 such places in Thailand. In general, municipalities defined legally are probably the same ones that would be defined as urban places using most academic definitions. Within the urban category, the joint capital cities of Bangkok-Thonburi (henceforth referred to as Bangkok) are treated in this report separately from the smaller urban places (referred to as Provincial Urban Places). The primacy of Bangkok in the Thai urban hierarchy argues for such a distinction (Goldstein, 1971) as does the desirability of assessing the extent to which migration to smaller urban places differs from that of movement to the primate city, given the recent growth of such smaller places and the possibility they offer as alternative growth centers to Bangkok itself.

Because the movement of the head of the household largely determines the movement of other household members, particular emphasis was given by the Longitudinal Survey to the migration history of the head of household and to the factors influencing his decision to move. Among the 20 sections of the Longitudinal Survey, one focused exclusively on the migration history of the head of the household and of household members who had moved away within the previous two years. In addition, as the very first step in the household interviews, a set of census-type questions was asked about all household members. This analysis is based exclusively on the data collected from the household head.

Of the total 2,030 household interviews obtained in the urban sample, 1,880 contained heads of household who were males. But of these, 346 were not fully or directly interviewed and these cases are omitted from this analysis. In addition, 252 foreign-born heads of households have been omitted because this analysis focuses on internal migration in Thailand. In all, therefore, a total of 1,282 cases form the basis for this analysis. But in particular tabulations the number may be slightly lower due either to the omission of cases lacking specific information or to computer problems.

Since this analysis is based on the urban sample, all respondents were living in urban places at the time of the survey. The migration history of the head of the household was obtained by a question asking him to indicate all places at which he had lived, beginning with the time of birth and covering all residences to the present one. The completeness of such a record obviously depends on the accuracy of the respondent's memory. Any person who moved from a different municipal area to the one in which he was living at the time of the survey or from a rural area to the present urban places of residence was considered a migrant. In addition, in order to assess the extent of multiple migration and the direction of such movement, all earlier moves in the respondent's history involving a change of residence between urban and urban, rural and urban, and any two rural places located in different districts (*amphoe*) were classified as migrations. However, until now, only the details for the first and the last move have been coded and tabulated.

MIGRATION PATTERNS

The very substantial role played by migration in urban growth in Thailand is evidenced in the fact that 70 percent of all male household heads living in urban places in 1970 were born outside their place of current residence. Moreover, this very high level of migration showed

TABLE 1
Distribution of Urban Male Household Heads by
Migration Status, by Current Age and
Place of Urban Residence

Current Age	Non-Migrants	Migrants	Total	
			%	No.
<i>BANGKOK</i>				
15 – 24	39.3	60.7	100.0	56
25 – 34	36.4	63.6	100.0	225
35 – 44	39.3	60.7	100.0	229
45 – 64	34.4	65.6	100.0	151
65 and over	37.9	62.1	100.0	29
Total	37.2	62.8	100.0	690
<i>PROVINCIAL URBAN PLACES</i>				
15 – 24	19.5	80.5	100.0	41
25 – 34	17.4	82.6	100.0	184
35 – 44	23.1	76.9	100.0	195
45 – 64	23.3	76.7	100.0	146
65 and over	23.1	76.9	100.0	26
Total	21.1	78.9	100.0	592
<i>TOTAL URBAN</i>				
15 – 24	30.9	69.1	100.0	97
25 – 34	27.9	72.1	100.0	409
35 – 44	31.8	68.2	100.0	424
45 – 64	29.0	71.0	100.0	297
65 and over	30.9	69.1	100.0	55
Total	29.8	70.2	100.0	1,282

minimum variation among different age groups, ranging only between 68 and 72 percent (see Table 1). Although the age at which the migrants moved to urban places is different from their present age (this will be explored in more detail later), the magnitude of these migration levels for household heads clearly suggest that migration has been and continues to be a major factor in the growth of the urban population.

Interestingly, the proportion of migrants among the total urban population differs considerably between Bangkok and the Provincial Urban Places. In Bangkok, 63 percent of all male household heads were migrants to the city. But in the Provincial Urban Places, eight out of every 10 male household heads had been born elsewhere. The levels of migration are obviously high in both categories, but the extremely high level in Provincial Urban Places suggests strongly an even more important role for migration in the growth of these smaller places. Undoubtedly, this reflects the more recent development of these smaller urban centers and their growing attractiveness to migrants. Yet one must also note that because of Bangkok's longer history as the primate city of Thailand, a number of former migrants to the capital city may have either moved out to smaller urban places or returned to rural places. Also, its longer history would give a greater opportunity for natural increase to play an important role in the city's growth and also for the effects of some of the city's earlier in-migration to be reduced through mortality.

For Bangkok, as for the total urban population, the variation in levels of migrants is minimal among the different age segments, ranging only between 61 and 66 percent. For the Provincial Urban Places, the range is slightly greater, between 77 and 83 percent, with those under age 35 having the higher percentage of migrants. Since these ages represent the peak periods of migration, this age differential probably reflects greater attractiveness of the smaller urban places to migrants in recent years compared to Bangkok itself. But again, it is the very high levels at all ages which are most significant.

For urban places as a whole, and for both Bangkok and Provincial Urban Places, the major portion of present heads of households moved from rural origins (Table 2). Of all migrants to urban places, 63 percent were born in rural places and only 35 percent originated in other urban

TABLE 2

Distribution of Migrants by Place of Birth, Frequency of Migration, and Recency of Migration,
by Current Age and Place of Urban Residence

Current Age	Place of Birth			Frequency of Migration			Recency of Migration		
	Rural	Urban	Rural-Urban Origin Unknown	Once Only Migrants	Multiple Migrants	No. of Migrations Unknown	Recent Migrants	Long- term Migrants	Recency Unknown
BANGKOK									
15 - 24	70.6	23.5	5.9	70.6	29.4	—	52.9	47.1	—
25 - 34	65.0	34.3	0.7	51.0	44.8	4.2	27.5	69.7	2.8
35 - 44	61.2	34.3	4.5	59.0	36.7	4.3	13.1	84.0	2.9
45 - 64	58.3	38.6	3.1	44.4	47.5	8.1	9.1	84.8	6.1
65 and over	43.8	50.0	6.2	38.9	44.4	16.7	17.6	70.6	11.8
Total	61.9	35.0	3.1	53.1	41.6	5.3	20.3	76.0	3.7
PROVINCIAL URBAN PLACES									
15 - 24	60.6	33.3	6.1	36.4	57.6	6.0	84.8	12.1	3.1
25 - 34	65.8	34.2	—	28.3	67.8	3.9	46.1	52.6	1.3
35 - 44	69.1	30.2	0.7	32.7	64.0	3.3	27.3	71.4	1.3
45 - 64	62.5	36.6	0.9	39.3	58.0	2.7	21.4	75.9	2.7
65 and over	42.1	52.6	5.3	25.0	65.0	10.0	10.5	84.2	5.3
Total	64.7	34.2	1.1	32.8	63.4	3.8	35.4	62.7	1.9
TOTAL URBAN									
15 - 24	65.6	28.4	6.0	53.7	43.3	3.0	68.7	29.8	1.5
25 - 34	65.4	34.3	0.3	39.3	56.6	4.1	37.1	60.9	2.0
35 - 44	65.4	32.1	2.5	45.3	50.9	3.8	20.6	77.3	2.1
45 - 64	60.6	37.5	1.9	41.7	53.1	5.2	15.6	80.1	4.3
65 and over	42.9	51.4	5.7	31.6	55.3	13.1	13.9	77.8	8.3
Total	63.4	34.6	2.0	42.6	52.9	4.5	28.1	69.1	2.8

places. Almost an identical pattern of origin characterized both the migrants to Bangkok and those to Provincial Urban Places. Both categories of urban places also followed a similar pattern of age differentials with respect to the place of origin of their migrants: A large majority of the migrants under age 65 originated in rural areas, but for those 65 and over a majority were urban in origin. The reasons for this age differential are not immediately obvious. It is unlikely that the movements to these places at earlier times were more heavily urban in origin. More likely, therefore, the greater concentration of migrants from urban places among the aged segment of the population reflects a selection in return movement to rural places on the part of former rural-to-urban migrants who have withdrawn from the labor force, as well as a shift in place of residence, involving movement from one urban location to another, on the part of older persons who have either stopped work or whose households were broken through the death of a spouse. Overall, these data on place of origin are noteworthy both in the support they give to the heavy role played by rural to urban migration in the growth of urban places, but also in their indication of the comparatively important role played by urban to urban population shifts in the total migration process. As an increasing proportion of the population comes to live in urban places, it is likely that in Thailand and other less developed countries the percentage of inter-urban movement will grow just as it has in the more developed world.

An advantage of the data collected on heads of households is the opportunity provided to ascertain the extent to which movement to residence in urban places represents a one-time move or the culmination of a series of moves and to relate this, in turn, to the rural-urban origin of the migrant. For migrants to all urban places, the data clearly indicate that multiple migration is the more common pattern. About 53 percent of all migrants to urban places had a history of two or more moves and, interestingly, the predominance of multiple migration characterized all ages above 25, although the percentages varied irregularly. The considerably greater concentration of once-only migrants among household heads under 25 obviously stems from the restricted opportunity for multiple moves because of their younger age.

The greater predominance of multiple migration among migrants to

TABLE 3

Distribution of Urban Male Migrant Household Heads by Recency of Migration and
Frequency of Migration by Current Age and Urban Place of Residence

Current Age	Migrant Household Heads			Once Only Migrants			Last Migration of Multiple Migrants		
	Recent Migrants	Long- term Migrants	Total %**	Recent Migrants	Long- term Migrants	Total %**	Recent Migrants	Long- term Migrants	Total %**
<i>BANGKOK</i>									
15 – 24	52.9	47.1	100.0	50.0	50.0	100.0	60.0	40.0	100.0
25 – 34	27.5	69.7	97.2	16.4	83.6	100.0	35.9	59.4	95.3
35 – 44	13.1	83.9	97.0	6.2	93.8	100.0	24.0	74.0	98.0
45 – 64	10.0	84.8	94.8	2.3	97.7	100.0	12.8	80.8	93.6
65 and over	17.6	70.6	88.2	*	*	*	*	*	*
Total	20.3	76.0	96.3	13.2	86.8	100.0	27.4	68.1	95.5
<i>PROVINCIAL URBAN PLACES</i>									
15 – 24	84.8	12.1	96.9	83.3	16.7	100.0	89.5	10.5	100.0
25 – 34	46.0	52.6	98.6	37.2	62.8	100.0	50.5	49.5	100.0
35 – 44	27.3	71.3	98.6	16.3	83.7	100.0	32.3	67.7	100.0
45 – 64	21.4	75.9	97.3	6.8	88.6	95.4	30.8	67.7	98.5
65 and over	10.5	84.2	94.7	*	*	*	15.4	84.6	100.0
Total	35.4	62.7	98.1	24.2	74.5	98.7	41.2	58.5	99.7

*Less than 10 cases.

**The Total Percent does not equal 100.0 in all cases because of a small number of unknowns.

urban places is clearly a function of the significant prevalence of this pattern among those moving to Provincial Urban Places as distinct from those moving to Bangkok. Among the migrants to Provincial Urban Places, almost twice as many had made at least one additional move before coming to their present place of residence as had moved there directly from their birthplace. By contrast, among the migrants to Bangkok, a clear majority had made only the one move to the capital city. This suggests strongly that the migration process is very different for those moving to Provincial Urban Places. The fact that this pattern of differentials between Provincial Urban Places and Bangkok persists in all age groups, with only minor exceptions among those aged 45 and over in the case of Bangkok, lends support to the basic difference in the nature of the migration process to the big city and to smaller urban places. It suggests that for a majority of migrants, movement to Bangkok generally does not involve a stepping stone process by which they first move to smaller urban places before coming to the big city. On the other hand, the data suggest that some such process operates for Provincial Urban Places. This will be explored more fully later in this analysis.

Since the foregoing analyses have relied on a definition of migrant based on change in residence between the time of birth and time of the survey, they have not been able to assess the impact of recent migration on the urban population. To achieve this, a distinction has been drawn, using standard census procedures, between those migrants who arrived in their present place of residence within five years preceding the survey, referred to as 'recent migrants', and those who moved there five or more years earlier, 'long-term migrants'. Such data clearly show the greater importance of recent migration in movement to Provincial Urban Places. Only one out of five migrants to Bangkok were recent migrants compared to one-third of all the migrants to Provincial Urban Places. The close association between age and recency of migration is clearly evident for both Bangkok and Provincial Urban Places; for both, a considerably higher proportion of younger persons qualified as recent migrants. Yet, the percentage in each age group classified as recent migrants was considerably higher for the Provincial Urban Places than for Bangkok with the single exception of the 65 and over age group.

TABLE 4

Place of Origin of Migrants by Frequency of Migration, by Current Age and Place of Urban Residence

Current Age	Once Only Migrants					Multiple Migrants				
	Place of Birth			Place of Birth		Place of Birth			Origin of Last Migration	
	Rural Place of Birth	Urban Place of Birth	Total %**	Rural	Urban	Total %**	Rural	Urban	Total %**	Total %**
<i>BANGKOK</i>										
15 - 24	79.2	20.8	100.0	*	*	*	*	*	*	*
25 - 34	73.6	26.4	100.0	54.7	45.3	100.0	62.5	35.9	98.4	98.4
35 - 44	70.0	28.8	98.8	53.1	46.9	100.0	53.1	44.9	98.0	98.0
45 - 64	64.3	35.7	100.0	55.3	44.7	100.0	56.5	37.0	93.5	93.5
65 and over	*	*	*	*	*	*	*	*	*	*
Total	70.5	29.0	99.5	53.4	45.5	98.9	57.1	38.4	95.5	95.5
<i>PROVINCIAL URBAN PLACES</i>										
15 - 24	66.7	33.3	100.0	63.2	36.8	100.0	42.1	57.9	100.0	100.0
25 - 34	74.4	25.6	100.0	60.8	39.2	100.0	40.0	60.0	100.0	100.0
35 - 44	91.8	8.2	100.0	60.4	39.6	100.0	46.3	53.7	100.0	100.0
45 - 64	72.1	27.9	100.0	55.4	43.1	98.5	49.2	49.2	98.4	98.4
65 and over	*	*	*	23.1	76.9	100.0	53.8	38.5	92.3	92.3
Total	79.6	20.4	100.0	58.0	41.7	99.7	45.9	53.4	99.3	99.3
<i>TOTAL URBAN</i>										
15 - 24	75.0	25.0	100.0	58.6	34.5	93.1	34.5	58.6	93.1	93.1
25 - 34	73.9	26.1	100.0	58.4	41.6	100.0	48.8	50.6	99.4	99.4
35 - 44	78.3	20.9	99.2	57.9	42.1	100.0	48.6	50.7	99.3	99.3
45 - 64	68.2	31.8	100.0	55.3	43.8	99.1	52.3	44.1	96.4	96.4
65 and over	72.7	27.3	100.0	28.6	71.4	100.0	47.6	42.9	90.5	90.5
Total	74.2	25.5	99.7	56.2	43.2	99.4	50.1	47.8	97.9	97.9

*Less than 10 cases.

**The Total Percent is not 100.0 in all cases because of a small number of unknowns.

It comes as no surprise that among those migrants who made only one move during their lifetime, a lower percentage did so within the most recent five-year period compared to those migrants who made more than one move (Table 3). This was true for both Bangkok and Provincial Urban Places. It was also consistently true that a higher percentage of those who moved to Provincial Urban Places, in contrast to those moving to Bangkok, were recent migrants, regardless of whether they had made one or more moves during their lifetime. This pattern is clearly consistent with the higher rate of movement to Provincial Urban Places associated with their more recent development as urban centers.

For both once only and multiple migrants, recency of migration is associated with age; the younger persons consistently had a higher proportion among the recent migrants. At the same time, for all age groups, multiple migrants had a higher proportion who moved recently than did once only migrants, and for most age groups the differences were substantial.

In order to gain further insights into the migration process, the place of origin of the 'once only migrants' and of the 'multiple migrants' are compared in the three panels of Table 4. Clearly, frequency of migration is related to the place of origin of the initial move. For both Bangkok and Provincial Urban Places, 70 percent or more of the once-only migrants originated in rural places in contrast to only 53 and 58 percent, respectively, of the multiple migrants to Bangkok and Provincial Urban Places. It is noteworthy that for both the once only and the multiple migrants, a higher percentage of those moving to Provincial Urban Places originated in rural locations. The fact that a considerably higher percentage of multiple migrants were born in an urban place (although still a minority of all multiple migrants) suggests that factors associated with initial urban residence contribute to a tendency toward repeated migration, which may involve movement between urban places.

Data on the origin of the last move of multiple migrants further underscore the differences in migration patterns between Bangkok and Provincial Urban Places. For Bangkok, a higher percentage of the last moves, well over half, originated in a rural setting. On the other hand,

for the Provincial Urban Places, the corresponding value was 46 percent. The much greater tendency for the last move of Bangkok's residents to originate in a rural place again suggests the lesser role which step migration plays in movement to the metropolis compared to movement to Provincial Urban Places.

Full assessment of the extent of stepping-stone migration must await the comprehensive tabulation and evaluation of the complete migration history data for the multiple migrants. However, comparison of the origin and destination of the multiple migrant's first migration with that of his last migration may provide some insights into the extent to which migration to urban places involves a stepping-stone process by which migrants first move from rural to smaller urban places and then on to the metropolitan center. But even such data are limited by the fact that the coding available for this analysis does not distinguish in the earlier moves of the migrant between those moves directed at Bangkok and those to Provincial Urban Places. To some extent, this problem can be mitigated by isolating the experience of those who migrated only twice between birth and 1970 (Table 5).

Examination of the experience of those migrants whose entire migration history was restricted to two moves, culminating either in Bangkok or Provincial Urban Places, shows that 60 percent of those born in rural places and moving to Bangkok did so directly from a rural place since their first move was rural to rural in character and only their second and last was rural to urban. By contrast, this was true of only 48 percent of those moving to Provincial Urban Places. The lower percentage of migrants to Bangkok than to Provincial Urban Places whose first move was rural to urban and whose last move was therefore urban to urban further supports the conclusion that more of the moves to Bangkok from rural places are direct and do not involve a stepping stone process. Since it is impossible at this point in the analysis to identify the character of the urban place involved in the first move, it is not possible to ascertain whether that move was from a rural place to Bangkok and then to a Provincial Urban Place or whether it involved a move to another smaller urban place before the most recent move.

Evaluation of the data for those migrants who made more than two

moves is more difficult because of the absence, for this analysis, of information on the intermediary moves between the first and the last period. The available data, presented in the second panel of Table 5 points in certain directions. In both Bangkok and Provincial Urban Places, a relatively small percentage, about one-fifth, of migrants reported a rural place both as the destination of their first move and the origin of the move culminating in their present urban residence. This suggests that only a minority of this category of multiple movers had a completely rural residential experience before their present urban residence. By contrast, a majority of migrants to Bangkok reported both their first and last move as involving a rural to urban migration, thus qualifying for what can be regarded here as a history of circular movement between a rural and urban place before taking up residence in Bangkok. A similar pattern was reported by only 38 percent of the migrants to Provincial Urban Places, suggesting that the pattern of circular migration between rural and urban places is more prevalent among those presently residing in Bangkok than among those in smaller urban places. This may in part be related to the dominant role which Bangkok occupies in the urban hierarchy of Thailand. Because this analysis is based on the experience of household heads, it is unlikely that persons reporting such circular migration are seasonal migrants; most seasonal migrants would migrate by themselves and take up temporary residence as members of household units.

The remaining two categories constitute the migrants whose experience could have involved a stepping stone process in that their movement prior to present residence in Bangkok or Provincial Urban Places displays an exclusively rural exposure before a consistently urban exposure. Particularly noteworthy is the fact that only 22 percent of the Bangkok migrants fall in these two categories compared to 45 percent of those in Provincial Urban Places. This again suggests strongly that stepping stone migration from rural to urban residence is much less frequent for those who take up residence in Bangkok than for those who move to Provincial Urban Places. Again it must be emphasized that the nature of the stepping-stone process for the Provincial

TABLE 5
Comparison of Origin and Destination of First and Last
Migrations of Multiple Migrants, by Place of Urban Residence

1970 Residence	Rural Birthplace				Total	
	RR/RU	RU/RU	RR/UU	RU/UU	%	N
<i>Two Moves Only</i>						
Bangkok	60.0	—	—	40.0	100.0	25
Provincial						
Urban Places	48.2	—	—	51.8	100.0	54
<i>More Than Two Moves</i>						
Bangkok	20.3	57.8	3.1	18.8	100.0	64
Provincial						
Urban Places	17.5	37.7	7.0	37.7	100.0	114
<i>Total Multiple Moves</i>						
Bangkok	31.5	41.6	2.2	24.7	100.0	89
Provincial						
Urban Places	27.4	25.6	4.8	42.2	100.0	168
	Urban Birthplace				Total	
	UU/UU	UU/RU	UR/RU	UR/UU	%	N
<i>Two Moves Only</i>						
Bangkok	50.0	—	50.0	—	100.0	42
Provincial						
Urban Places	44.4	—	55.6	—	100.0	45
<i>More Than Two Moves</i>						
Bangkok	63.6	24.2	6.1	6.1	100.0	33
Provincial						
Urban Places	56.0	20.0	6.7	17.3	100.0	75
<i>Total Multiple Moves</i>						
Bangkok	56.0	10.7	30.7	2.7	100.0	75
Provincial						
Urban Places	51.7	12.5	25.0	10.8	100.0	120

Note: R denotes rural and U denotes urban. RR/RU, for example, indicates first migration was rural to rural and last migration was rural to urban.

Urban migrants may be a complicated one involving residence in Bangkok itself prior to their most recent residence in the Provincial Urban Place. The considerably larger number of migrants who reported more than two moves accounts for the fact that the combined data for all multiple movers (see the third panel) reflects the patterns just reviewed for those who made more than two moves.

In the lower half of Table 5, a similar set of data are presented for those migrants to Bangkok and Provincial Urban Places who were born in urban places. Again, these will be discussed separately for those who made only two moves (since their migration history is complete) and those who made more than two moves. For the former, a substantial proportion of the two-move migrants had no exposure to a rural residence. Just half of those presently living in Bangkok and slightly fewer of those living in Provincial Urban Places had as their intermediary place of residence another urban place. What is perhaps more surprising is that half of those presently in Bangkok and over half of those in Provincial Urban Places had moved to a rural place from their urban place of birth before moving to their urban place of residence at the time of the survey. To this extent, they represent return movers from an intermediary rural residence. Within the limits of the present data, however, it is not possible to ascertain whether, between their place of birth and present residence, they had changed from a smaller to a larger or from a larger to a smaller urban location.

The information available on those multiple migrants who made more than two moves indicates that for a majority the residential exposure based on first and last moves was entirely urban in character. In a sense, all of the remaining moves qualify as circular migration, since they began in an urban place and ended in an urban place, but the particular combination involved in the intermediary moves differed and, for reasons cited earlier, are not fully ascertainable as yet. Among these, the single largest category both for residents of Bangkok and for those of Provincial Urban Places involves a first move which is urban to urban in character and the last move rural to urban. The possibility of a more extended exposure to a rural environment is suggested for that category involving an initial urban to rural move and a final rural to urban move, but this category represented only a small minority of

both the Bangkok and Provincial Urban residents. At best, these data for persons born in urban places therefore suggest that a history of consistent exposure to urban places despite repeated movements is the most common, but that for a considerable proportion of these migrants some residence in rural places is involved.

Overall, therefore, the migration experience appears to be quite varied and involves, even for those born in urban places, some exposure to residence in rural places. Again, it must be emphasized that these data must be regarded as suggestive in character. They point, however, to the complex migration histories which characterize a member of migrants, to a stronger possibility that stepping stone migration is more characteristic of those moving to smaller urban places compared to those moving to the metropolitan center, and that circular movement is quite common among both those originating in urban places and those born in rural places. Perhaps most important, these varied patterns argue strongly for much greater attention in migration research to the selective character of these varied combinations of movement and to their differential impact on the adjustment of migrants to the urban environment.

AGE DIFFERENTIALS

A universal feature of migration is its age selectivity. Associated with those critical stages in the life cycle in which entrance to the labor force and formation of family units occur most frequently, mobility tends to be highest in the late teens and twenties. For the total population covered in the Longitudinal Survey, both rural to urban movement and urban to urban movement followed the age-selective patterns noted earlier (Goldstein, 1974). This selectivity operated for both Bangkok and the Provincial Urban Places. It must be emphasized, however, that these patterns were based on measurement of migration in terms of a different place of residence within the five years immediately preceding the survey, and this measure was therefore quite sensitive to the age selectivity operating about the time of migration.

Evidence of the operation of age selectivity among heads of households varies, depending on whether five-year or lifetime migration is used as a measure, and particularly on whether it is determined by age at the time of the survey or age at the time of migration.

Overall, the distribution by current age of lifetime migrants to Bangkok differs minimally from that of the non-migrant segment of the population, as shown in Table 6. If the migrants are distinguished by place of birth, the results show that among those coming to Bangkok from rural areas, a slightly higher proportion are in the 25-34 age group and fewer in the oldest age group, compared to the non-migrants. Among those moving from other urban places, the noticeable differences are in the slightly higher percentage of migrants in the 45-64 year category and the larger percent in the oldest group. Overall, however, the similarities are more striking than the differences.

In Provincial Urban Places, the age differentials are somewhat greater with more of the rural to urban migrants being concentrated in the age groups under 45 in contrast to the non-migrant population. Among those moving from other urban places, the pattern is more irregular, with some excess among the migrants in the 25-34 age group. Again, however, the overriding impression is the close similarity among the non-migrant and migrant population.

This general absence of marked differentials in age composition between migrants and non-migrants is undoubtedly related to the measurement of migration in terms of change of residence between birth and 1970. The data which distinguish between recent (five-year) and long-term migrants point to the operation of age selectivity at the time of migration. A considerably higher proportion of recent migrants are in the two younger age groups compared both to the non-migrant segments of the population and to the long-term migrants. For example, 65 percent of those who had moved to Bangkok within the five years preceding the survey were under age 35 in contrast to only 40 percent of the non-migrants and 35 percent of the long-term migrants. A quite similar pattern of differences characterized the recent and the long-term migrants and the non-migrants in Provincial Urban Places.

The existence of these sharp differentials emphasizes the impact of the particular definition of migration used as well as the limitations

TABLE 6

Distribution of Urban Male Household Heads by Current Age, by Migration Status, Place of Birth,
Recency of Migration, and Frequency of Migration, by Urban Place of Residence

Current Age	Non- Migrants	Total Migrants	Rural Origin*	Urban Origin*	Recent Migrants	Long- term Migrants	Once Only Migrants	Multiple Migrants
<i>BANGKOK</i>								
15 - 24	8.6	8.3	9.5	5.5	20.7	4.9	10.4	5.6
25 - 34	31.9	33.4	34.8	32.9	44.8	30.3	31.7	35.6
35 - 44	35.0	32.4	32.4	31.5	20.7	35.3	35.7	28.3
45 - 64	20.2	22.2	20.9	24.6	10.4	25.8	19.1	26.1
65 and over	4.3	3.7	2.4	5.5	3.4	3.7	3.1	4.4
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number**	257	410	253	146	87	326	230	180
<i>PROVINCIAL URBAN PLACES</i>								
15 - 24	6.4	6.9	6.9	7.1	17.0	1.4	7.8	6.4
25 - 34	25.6	32.5	32.2	33.1	42.4	27.4	28.1	34.8
35 - 44	36.0	32.3	35.3	27.3	24.8	36.6	32.0	32.4
45 - 64	27.2	24.3	22.9	26.0	14.6	29.1	28.8	22.0
65 and over	4.8	4.0	2.7	6.5	1.2	5.5	3.3	4.4
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number**	125	449	292	154	165	292	153	296

*Origin defined in terms of birthplace.

**The discrepancies in total number of migrants in the various categories are due to small numbers of unknowns which were not included in the tabulations.

inherent in the use of current characteristics as the basis for assessing the selective character of migration. The data on recent migrants, to the extent that the age characteristics are closer to those at time of migration, point to a very selective process through which a disproportional number of young heads of households are attracted to both the primate city and the smaller urban places. At the same time, comparison of the current ages of once only and multiple migrants (last panel of Table 6) does not point to a clear-cut pattern of differentials. More of the once only migrants to Bangkok tend to be under age 35 and more of the multiple migrants to Provincial Urban Places are this young. The obverse holds for those between ages 45 and 64. But the more meaningful relations for these two groups may be those referring to age at time of migration.

The relation between migration and age can be explored more exactly by examination of the information collected in the survey on age at time of migration. These are presented in Table 7 for once only migrants, and for multiple migrants in terms of age at first migration and age at last migration to present place of residence. These statistics make it clear that for most migrants the initial move occurs very early in the life cycle, and that migration is particularly concentrated in those groups under age 25. Among those migrants living in Bangkok who have moved only once during their lifetime, almost one fourth arrived in the metropolis before age 15. This suggests that they came to the capital city as members of household units, and that their move was not the result of their own initiative. An additional 58 percent of all once only migrants to Bangkok arrived in the city while between the ages of 15 and 24. Just under 20 percent of the once only migrants were 25 years and over at the time they moved to Bangkok. This contrasts with the 34 percent of the Bangkok male population which is 25 and over, a proportion which probably has not changed very much over time.

The significant impact of early migration in the history of multiple migrants is evidenced by the fact that just under 50 percent of all migrants to Bangkok who migrated more than once during their lifetime first migrated while they were under 15 years of age. This move was not necessarily to Bangkok; in fact, it is highly likely that it was to another destination. An additional 43 percent made their first move

TABLE 7

Distribution of Migrants by Age at Time of Migration, by Current Age and Number of Migrations,
by Place of Urban Residence

BANGKOK										PROVINCIAL URBAN PLACES									
Age at Migration										Age at Migration									
Current Age and No. of Migrations		0-14	15-19	20-24	25-34	35-44	45 & Over	Total		0-14	15-19	20-24	25-34	35-44	45 & Over	Total			
								%	N							%	N		
ONCE ONLY MIGRANTS																			
15-24		16.7	58.3	25.0	-	-	-	100.0	24	-	66.7	33.3	-	-	-	100.0	12		
25-34		20.6	35.6	23.3	20.6	-	-	100.0	73	18.6	9.3	37.2	34.9	-	-	100.0	43		
35-44		24.7	25.9	28.4	16.1	4.9	-	100.0	81	6.1	10.2	36.7	32.7	14.3	-	100.0	49		
45-64		27.9	21.0	30.2	16.3	2.3	2.3	100.0	43	4.8	7.2	23.8	30.9	23.8	9.5	100.0	42		
Total		22.8	32.0	25.9	15.8	2.2	1.3	100.0	228	9.3	13.2	33.1	30.5	11.3	2.6	100.0	151		
FIRST MIGRATION OF MULTIPLE MIGRANTS																			
15-24		60.0	20.0	20.0	-	-	-	100.0	10	52.6	47.4	-	-	-	-	100.0	19		
25-34		45.9	39.3	11.5	3.3	-	-	100.0	61	43.7	33.0	16.5	6.8	-	-	100.0	103		
35-44		47.1	21.6	19.6	5.9	5.8	-	100.0	51	26.0	29.2	30.2	13.6	1.0	-	100.0	96		
45-64		54.3	17.4	19.6	6.5	2.2	-	100.0	46	21.9	21.9	29.7	17.2	7.8	1.5	100.0	64		
Total		48.9	25.9	17.2	4.6	2.3	1.1	100.0	174	32.9	29.5	23.4	11.5	2.0	0.7	100.0	295		
LAST MIGRATION OF MULTIPLE MIGRANTS																			
15-24		10.0	50.0	40.0	-	-	-	100.0	10	5.3	21.0	73.7	-	-	-	100.0	19		
25-34		6.6	18.0	39.3	36.1	-	-	100.0	61	-	13.6	30.1	56.3	-	-	100.0	103		
35-44		8.0	14.0	24.0	40.0	14.0	-	100.0	50	1.1	6.3	14.7	48.4	29.5	-	100.0	95		
45-64		2.3	18.2	6.8	45.5	13.6	13.6	100.0	44	1.6	3.1	7.8	28.1	32.8	26.6	100.0	64		
Total		5.8	18.1	25.2	36.8	8.8	5.3	100.0	171	1.0	8.8	21.8	42.5	17.7	8.2	100.0	294		

Note: The 65 and over age group has been omitted because of the small number of cases who are in this group. They have, however, been included in the totals. Inconsistencies in total numbers are due to coding errors.

between ages 15 and 24, so that virtually all of the first moves made by multiple migrants occurred before the migrants had become 25 years old. Yet, indicating that not all mobility is concentrated in the youngest age groups, the data on the age distributions of the multiple migrants at the time of their last migration, which is the move which led to their present residence in Bangkok, indicates that only a small percentage arrived there as children; 43 percent came in what is usually identified as the peak periods of migration, ages 15-24, and a very substantial number came during ages 25-34. Moreover, as many as 14 percent arrived while age 35 and over. This suggests that the reasons accounting for the first moves of multiple migrants were quite different from those motivating the last migration.

The data on current age cross-tabulated by age at migration is of value in providing some indication of the length of residence of migrants in their present place of residence. For the once only migrants, it indicates that a substantial portion of those who were 35 and over at the time of the survey had moved to the city before age 20; approximately one-fourth did so under age 15 and almost as many between ages 15 and 19. As a result, the migrants in these groups have had an extensive period of residence in the city and opportunity, all other things being equal, to assimilate to urban life. By contrast, among those who made multiple moves during their lifetime, under 10 percent of those presently between ages 35-44 and only 2 percent of those between ages 45-64 had moved to Bangkok while children, and under 20 percent did so between ages 15-19; in short, the vast majority arrived in the city as adults. Depending on whether or not their prior residence was in urban places and what the size of the urban place was, the problems of assimilation to an urban way of life may have been considerably greater for these individuals.

Data on age at the time of move to Provincial Urban Places show quite a different pattern than that noted for the migrants to Bangkok. In contrast to the substantial number of once only migrants who arrived in Bangkok while children or during their late teens, only 22 percent of once only migrants to Provincial Urban Places moved there before they were 20 years old. The greatest concentration of once

only migrants to Provincial Urban Places — almost two-thirds — was in the 20-24 and 25-34 age groups.

A similar pattern of differentials between migrants to Bangkok and those to Provincial Urban Places characterizes the age distribution at time of last migration on the part of multiple migrants. Whereas 24 percent of the multiple migrants to Bangkok were under age 20 when they made their last move, just under 10 percent of multiple migrants to Provincial Urban Places were this young; and although only 51 percent of the Bangkok migrants were 25 and over, this was true of 68 percent of the Provincial Urban migrants. Thus, at the same time that age at time of last migration is considerably higher for multiple migrants than for once only migrants in both Bangkok and Provincial Urban Places, it is also true that for both categories of migrants, Provincial Urban Places attracted individuals considerably older than those moving to Bangkok. The same differential extends to specific age groups, judged by current age.

Movement to Provincial Urban Places has thus operated in quite a different selective fashion with respect to age, drawing upon those who are further along in the life cycle. This is possibly related to the types of economic opportunities available in these smaller urban places. Movement to them may be much more 'rational' in character in the sense that individuals are less likely to move in the hopes of realizing certain aspirations; instead, more may know in advance what they will be doing and what specific opportunities are open to them. Moreover, the recency of the growth of the smaller urban places may also be a factor in accounting for the different patterns of age selection. To the extent that such places have not been attractive to migrants for as long a period of time as Bangkok itself, it is more likely that the pull operating exerts more attraction for more mature persons whose migration is more fully assessed and/or planned. The fact that more of the migrants to Provincial Urban Places are professionals, administrators, and government officials, a number of whom are transferred, also helps to explain the older average age of migration and the greater absence of children; if such job transfers are seen as temporary moves, even if involving several years of residence, more of these migrants may leave their families behind in their place of origin.

Cross-tabulation of once only and multiple migrants by rural and urban origin permits further exploration of the inter-relationships among frequency of move, origin and destination of move, and age at migration (Table 8). For once only migrants, these data suggest that those moving from rural areas to Bangkok arrive, on the average, at a somewhat older age than do those moving from another urban place. Just over half of the rural to Bangkok migrants arrived while under age 20 in contrast to two thirds of those from an urban origin. This, coupled

TABLE 8
Distribution of Migrant Household Heads by Age at
Time of Migration, by Origin of Migration and
Frequency of Migration, by Urban Place of Residence

Age at Migration	Once Only Migrants		Multiple Migrants*	
	Rural Origin	Urban Origin	Rural Origin	Urban Origin
<i>BANGKOK</i>				
0 – 14	20.8	28.8	7.1	3.1
15 – 19	29.9	37.9	15.2	23.1
20 – 24	29.2	19.7	21.2	33.8
25 – 34	18.2	7.6	42.4	27.7
35 – 44	1.3	3.0	10.1	3.1
45 and over	0.6	3.0	4.0	9.2
Total %	100.0	100.0	100.0	100.0
Total N	154	66	99	65
<i>PROVINCIAL URBAN PLACES</i>				
0 – 14	10.9	3.0	0.7	1.3
15 – 19	13.3	12.1	9.0	9.6
20 – 24	33.3	30.3	18.6	24.8
25 – 34	27.5	45.5	46.3	37.6
35 – 44	12.5	6.1	15.7	19.1
45 and over	2.5	3.0	9.7	7.6
Total %	100.0	100.0	100.0	100.0
Total N	120	33	134	157

**Origin is based on place of residence prior to migration to current urban place of residence; and age is based on age at last migration.*

with the significantly higher percentage of those of rural origin in the 20-34 age range, suggests that a sizeable proportion of urban to Bangkok movers may have first come to the city to obtain an education and remained on, whereas more of those coming from rural places were economically motivated. Compared to the once only migrants, considerably fewer of the multiple migrants of both rural and urban origin made their move to Bangkok while under age 20. The higher average age of the multiple migrants, regardless of the origin of their move to Bangkok, lends support to the assumption that the underlying reasons associated with multiple movement are different and that further attention to the characteristics of such migrants and their motives for migration is desirable.

Consistent with earlier observations, all categories of migrants to Provincial Urban Places made their move to such places at a higher average age than did the migrants to Bangkok. For example, whereas half of the rural to Bangkok once only migrants moved while under age 20, this was true of only 24 percent of the migrants from rural to Provincial Urban Places. The contrast is even sharper for the once only migrants who originated in urban places. Two thirds of these came to Bangkok while under age 20, but this was true of only 15 percent of those moving to Provincial Urban Places. This strongly supports the speculation that the desire to obtain an education in the metropolitan center was a major factor in the high proportion of young migrants coming to the capital city from other urban places. By contrast, over three-fourths of the once only migrants to Provincial Urban Places from other urban places were in the 20-34 age range, suggesting the key role that employment opportunities must have played for this migration stream. For the multiple migrants, only a small proportion of those living in either rural or urban places before their move to Provincial Urban Places were under age 20, almost two thirds of both groups were in the 20-34 range; and a considerable proportion were 35 and over. The age composition of these migrants was again considerably higher than that of comparable groups moving to Bangkok, lending further support to the expectation that the basic motives and socio-economic characteristics of migrants going to Provincial Urban Places are different from those of the migrants to Bangkok.

SUMMARY AND CONCLUSIONS

The pace of urbanization in the less developed world and its significance for development emphasizes the need for more attention to the role of migration in the urbanization process. More particularly, the sharp growth in the number and size of large cities and their dominant position in the urban hierarchy argues strongly for particular research focusing on such cities and on the role of migration in their growth. At the same time, because of the potential contribution of smaller urban places both as centers for regional development and as alternative destinations for migrants to big cities, closer attention must be given to the level and character of population movement to such places.

Using a unique set of data emanating from the Longitudinal Survey of Social, Economic, and Demographic Change in Thailand conducted by the Institute of Population Studies at Chulalongkorn University, this analysis has compared levels of population movement to Bangkok and to smaller urban places especially with regard to the origin, recency, and frequency of moves on the part of the migrant populations. The data analyzed here are based on the urban phase of the Longitudinal Survey which was undertaken in 1970 and encompassed some 2,100 urban households. Analysis is restricted to male heads of households who were born in Thailand.

The very substantial role played by migration in urban growth in Thailand is evidenced in the fact that 70 percent of all male household heads living in urban places in 1970 were born outside their place of current residence. The higher rate of migration to Provincial Urban Places supports the possibility that these smaller places are increasing their attractiveness to migrants, both because of the earlier very rapid growth of Bangkok and because of the increase in opportunities available in smaller urban places. Overall, a large proportion of both the migrants to Bangkok and those to Provincial Urban Places were born in rural places, attesting to the heavy role played by rural to urban migration in the growth of urban places. At the same time, however, one-third of the migrants originated in other urban places, suggesting the important, and probably increasing, role played by urban to urban population shifts in the total migration process and in the redistribution of population between big and smaller urban places.

That migration does not generally represent a single move during a lifetime is clearly evidenced in the finding that a majority of all mi-

grants to urban places had a history of two or more moves. Again, the difference in patterns between Bangkok and Provincial Urban Places is noteworthy: a much higher percentage of migrants to smaller urban places had made at least one previous move during their lifetime, whereas among those moving to Bangkok, over half had experienced their first move. This difference indicates that movement to Bangkok generally does not involve as much of a stepping stone process as movement to smaller urban places. It further suggests, and data not presented in this analysis lend support to such an interpretation, that the kinds of persons moving to smaller urban places are different from those moving to Bangkok. The heavier concentration of government officials, professionals, and administrators among the migrants to smaller urban places helps to explain the greater predominance of a multiple migration experience among such migrants.

The importance of migration to Provincial Urban Places is also evidenced in the considerably higher proportion of migrants who had moved to such locations within the five years preceding the survey compared to those moving to Bangkok. Since this characterized all age groups, the greater attraction of smaller urban places to migrants may well be related to recent changes in the opportunities available in such locations. Multiple migration seems clearly interrelated with place of origin — a higher percentage of once only migrants originated in rural places. The tendency toward repeated migration is evidently related to the type of economic function which the migrants play in the urban setting, as noted earlier.

More intensive analysis and comparison of the first and last migration experience of multiple migrants to Bangkok and Provincial Urban Places supports the conclusion that a stepping stone process is more characteristic of the movement to smaller urban places than to Bangkok. But this analysis also points to a considerable volume of 'circular' movement, that is, migration back and forth between urban and rural places. This pattern is, however, more characteristic of those living in Bangkok at the time of the survey, suggesting that it may be related to the dominant role which the capital city occupies in the urban hierarchy of Thailand. For both urban categories, the extensive degree of such circular movement suggests that analyses in terms of rural to urban migration are likely to ignore a significant portion of total mobility and, even more important, may fail to gain appropriate in-

sights into the role of movement between urban and rural places in development. More intensive analysis of the motives for such circular movement and the impact which it has both on the migrant and on the places of origin and destination are certainly called for. In particular, the role of such migrants as agents of social change in rural areas should have high research priority.

Finally, this paper has analyzed the extent of age differentials between migrants and non-migrants as well as the differentials among the various categories of migrants reviewed earlier. The analysis strongly emphasizes the importance of considering origin, recency, and frequency of moves in any attempt to assess the age selectivity of migration as well as selectivity with respect to other variables not explored here. Use of current age masks important differences in age at time of movement and, to the extent that duration of residence in a given location may significantly influence the success of adaptation to the urban way of life, assessment of other differentials clearly must consider not only current age but age at time of migration as well. Moreover, the existence of a considerable degree of circular migration, the length of exposure to different types of environment, and the points at which such exposure occurred in the life cycle may very well be key considerations in explaining the success or failure of social and economic adjustment in the urban place of current residence.

For multiple migrants, for example, age at time of last migration is considerably higher than for once only migrants in both Bangkok and Provincial Urban Places; and the latter attracted individuals considerably older than those moving to the capital city. This again suggests that movement to smaller urban places involves a different type of selection than that to Bangkok. Higher age may indicate that such movement is more purposive in character, in part because of the occupational composition of the migration streams which includes a number of the occupations involving job transfers; it may also reflect a greater knowledge on the part of migrants to smaller urban places of the opportunities available in them.

In sum, this analysis lends strong support to the key role which migration has played and continues to play in the growth of the metropolitan center and increasingly in the growth of smaller urban places. It also suggests strongly that the character of movement to these two kinds of locations is quite different and that growing attention must

therefore be given to the selective character of the migration streams, to the motives underlying movement, to the differential patterns of adjustment faced by the migrants, and to the character of movement from these two types of urban places to rural places and between the urban places themselves. This initial analysis of the migration histories of migrants to Bangkok and Provincial Urban Places thus clearly indicates that the migration process is much more complex than a simple rural to urban population exchange and that failure to recognize this may lead to serious shortcomings in any attempt to assess the full nature of the relationship between migration and urbanization as well as between migration and urban and rural development.

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VOLUNTARY MIGRATION IN INDONESIA

Mochtar Naim

Geographical mobility among the Indonesians has never been substantial. In pre-colonial days, geographical mobility was enjoyed mainly by traders and seafarers only, while peasants and fishermen who formed the great majority of the people remained dormant and untravelled. In colonial days, despite the general improvements in communication and transportation systems, the native population could not travel much. Over 94 percent of them lived in rural areas in their native districts. Thus, it is within this limitation that we discuss voluntary migration in Indonesia in the contemporary situation. The discussion will first ascertain in statistical terms the magnitude of migration among major ethnic groups in Indonesia. It will then seek the causes for their migration, and in the end formulate a typology which may be used as a basis for further research.

THE STATISTICS OF MIGRATION

In my work on merantau among the Minangkabau of West Sumatra, I obtained figures of migration among several major ethnic groups in Indonesia. I define the word merantau or 'voluntary migration' as

TABLE 1
Comparative Degrees of Intensity of Migration Among Major Ethnic Groups in Indonesia, Based on 1930 Census Data

Ethnic Group	1930 Total (Census)	Inside Own Territory		Outside Own Territory		
		N	%	N	%	
<i>A. Higher Intensity</i>						
Baweanese	45,711	29,305	64.1	16,406	35.9	I
Batak	919,462	778,686	84.7	140,776	15.3	II
Banjarese	944,235	809,842	85.8	134,393	14.2	III
Minangkabau	1,928,322	1,717,031	89.0	211,291	11.0	IV
Buginese	1,543,035	1,380,334	89.5	162,701	10.5	V
Menadonese	281,599	254,947	90.5	26,652	9.5	
Ambonese	232,573	211,407	90.9	21,166	9.1	
Bangkulu	48,301	44,306	91.7	3,995	8.3	
Mandarese	189,186	175,271	93.0	13,915	7.0	
Total	6,132,424	5,401,129	(88.1)	730,663	(11.9)	
<i>B. Lower Intensity</i>						
Coastal Malay	953,397±	903,397	94.8	50,000±	5.2	
Palembangese	770,917	733,210	95.1	37,707	4.9	
Nias	202,400	194,939	96.3	7,461	3.7	
Javanese	27,808,623	39,344,423	96.6	1,364,896*	3.4	
Sundanese	8,594,834					
Madurese	4,305,862					
Makassarese	642,720	630,146	98.0	12,574	2.0	
Jambier	138,573	136,078	98.2	2,495	1.8	
Achenese	831,321	821,900	98.9	9,421	1.1	
Timorese	1,628,864	1,614,738	99.1	14,126	0.9	
Lampungese	181,710	180,160	99.1	1,550	0.9	
Toradjan	557,590±	556,590	99.8	1,000±	0.2	
Dayak	651,391±	650,391	99.8	1,000±	0.2	
Balinese	1,111,659	1,110,359	99.9	1,300	0.1	
Sasak	659,477	658,529	99.9	948	0.1	
Total	49,039,338 (100.0)	47,534,860	(96.9)	1,504,478	(3.1)	

*Inc. Javanese migrants in Malay Peninsula (170,000), Surinam (± 33,000) and New Caledonia (± 11,000).

Source: Volkstelling 1930, IV, pp. 179-180, 161 sqq. (Table 10); V, 19 sqq; 1931 Census on Malaya.

'leaving one's cultural territory voluntarily, whether for a short or long time, with the aim of earning a living or seeking further knowledge or experience, normally with the intention of returning home' (Naim, 1973a). Thus in my definition, it is not *merantau*, or voluntary migration, if one moves to a town or a place which is still within the cultural boundary of one's native land, where language, lores and tradition are practically still the same. That is to say, a man from Bukit Tinggi is not considered to be *merantau* if he moved only to Padang; he is *merantau* if he moved to Jakarta, Medan, Palembang or Pekanbaru, where he encounters different cultural variants and communicates with people different from his own ethnic group. Likewise, a rural Javanese of Central Java is not considered to be *merantau* if he moved to a town in Central, or even East Java, nor is he considered to be *merantau* if he is one of those who were transferred to the Outer Islands as 'transmigrants'.

Our statistics, however, cannot distinguish between the voluntary and non-voluntary nature of their migration, except that it is generally agreed that the migration figures of the Javanese, Sundanese and Madurese outside Java and Madura are mostly of a non-voluntary nature, due mainly to transmigration and indentured labour schemes. The percentage of migration is derived by taking the ratio of the number of each ethnic group enumerated outside their territorial-cultural boundary and those inside their territorial-cultural boundary. Based on the 1930 census, the migration figures are shown in Table 1.

From such figures some interesting findings can be noted. Firstly, the ethnic groups in terms of their degree of migration can be divided into two groups: the higher intensity migration group, and the lower intensity migration group. Ethnic groups in the second category are apparently more numerous, whereas in the first category there are only five ethnic groups whose intensity of migration was higher than 10 percent. Secondly, contrary to popular assumption, the Minangkabau migration comes only fourth after the Baweanese, Batak, Banjarese and Buginese; though it is obvious that absolutely Minangkabau migration was the largest in the group. Thirdly, the Javanese, Sundanese and Madurese had low intensity of migration, though clearly they consti-

tute the largest absolute number who migrated outside their cultural territories.

We were indeed fortunate that the 1930 Census data did give us a detailed account of the internal migration of every ethnic group in Indonesia. Unfortunately, however, this is not the case with the 1961 or 1971 Census data, since neither raised the question of ethnic affiliations.¹ It becomes very hard, therefore, to estimate the migration figures of various ethnic groups for 1961 and 1971, though data on place and date of birth may shed some light on ethnic identity, since it is generally assumed that ethnicity and place of birth are still largely congruent. Nevertheless, there is little that we could expect from the 1961 Census data, since we are informed that most of the documents and census forms have somehow disappeared, while the details of the 1971 Census figures have not been published or made available.²

What one can do to estimate the size and percentage of migration of each ethnic group for 1961 (and also for 1971 if all the necessary data have been made available) is to utilize the average national growth rate for 1961 as compared to 1930. This average national growth rate is found to be 1.6; that is by simply dividing the 1961 total population by the 1930 total population. Actually the average rate for the Outer Islands is higher than the national average rate as can be seen from the calculations in Table 2. However, to be on the safe side, we could utilize the national average rate to arrive at the projected estimates for the size and percentage of migration among major ethnic groups in Indonesia for 1961. The figures thus derived are shown in Table 3.

The validity of such projected estimates depends very much on the question whether the ethnic composition in the respective territories as in column 5 remains much the same in 1961 as in 1930. It probably does except for East Sumatra, Lampung and metropolitan Jakarta, which have been the major recipients of in-migration since 1930. It also depends on the question whether intervening variables, such as war and revolution in the 1940s, altered the over-all trend of migration for each ethnic group between 1930 and 1961.

The following chart will give us a better perspective of the trends of migration among major ethnic groups between 1930 and 1961. It appears that there are only four ethnic groups, all from the Outer

TABLE 2
Increase of Population in 1961 and 1971 As Compared to 1930

Islands	Population Census			% Increase	
	1930	1961	1971	1930– 1961	1930– 1971
Java and Madura	41,718,364	62,993,056	76,099,578	51	82
Sumatra	8,254,843	15,739,361	20,819,945	91	152
Kalimantan	2,168,661	4,101,475	5,107,410	89	136
Sulawesi	4,231,906	7,079,349	8,534,711	67	102
Other Islands	4,353,459	7,105,586	8,620,898	63	98
Indonesia	60,727,233	97,018,829	119,182,542	60	96

Source: Based on Widjojo Nitisaastro, Population Trends in Indonesia, pp. 75, 176, 180, Tables 16, 44 and 49.

Islands, which show ascending trends in their migration. They are the Batak, Ambonese, Menadonese and Minangkabau. The rest remain more or less static. Although the Baweanese have a slightly higher percentage than the Minangkabau in 1961, the trend appears to have decreased from 35.9 in 1930 to 31.6 in 1961. With the Minangkabau, which is the major focus of my research on merantau, there is clearly a marked increase of emigration, that is from 11 percent in 1930 to 31.6 percent in 1961, and already 44 percent according to my estimate in 1971 (Naim 1973a).

THE CAUSATIVE FACTORS FOR MIGRATION

A multi-faceted approach appears, as we shall see later, to be the most convenient way to look for the causative factors for migration among the major ethnic groups under study. Our aim here will be to discern various possible factors leading to migration to see how they each contribute to the migration movement and how they are related to one another. Each of these factors will be applied to each ethnic group to find out whether the same factors explain their migration.

(Text continued on page 156)

TABLE 3

Projected Estimates for Migration Among Certain Ethnic Groups in Indonesia for 1961

Ethnic Groups	Total in 1930	Total Proj. Estimates for 1961	1961 Total Pop. in Resp. Terr.	% in Resp. Terr.	Total Proj. Est. in Resp. Terr. for 1961	Total Merantau	% Merantau in 1961
Baweanese	45,711	73,079	52,472	95.00	49,848	23,231	31.8
Minangkabau	1,928,322	3,082,808	2,319,057	90.95	2,109,182	973,626	31.6
Batak	952,656	1,523,022	1,609,346	76.18	1,226,000	297,022	19.5
Banjarese	944,235	1,509,560	1,473,155	90.00	1,325,840	183,720	12.2
Ambonese	232,573	371,817	1,547,940	21.26	329,178	42,639	11.5
Menadonese	281,599	450,196	2,003,211	22.96	459,937	—	—
Buginese	1,543,035	2,466,868	5,076,138	45.40	2,304,567	162,301	6.6
Javanese	40,709,319	65,082,468	63,059,575	99.70	62,870,396	2,212,072	3.4
Achenese	831,321	1,329,043	1,628,983	79.50	1,295,041	34,002	2.6
Balinese	1,111,659	1,777,222	1,782,529	98.30	1,752,226	24,996	1.4

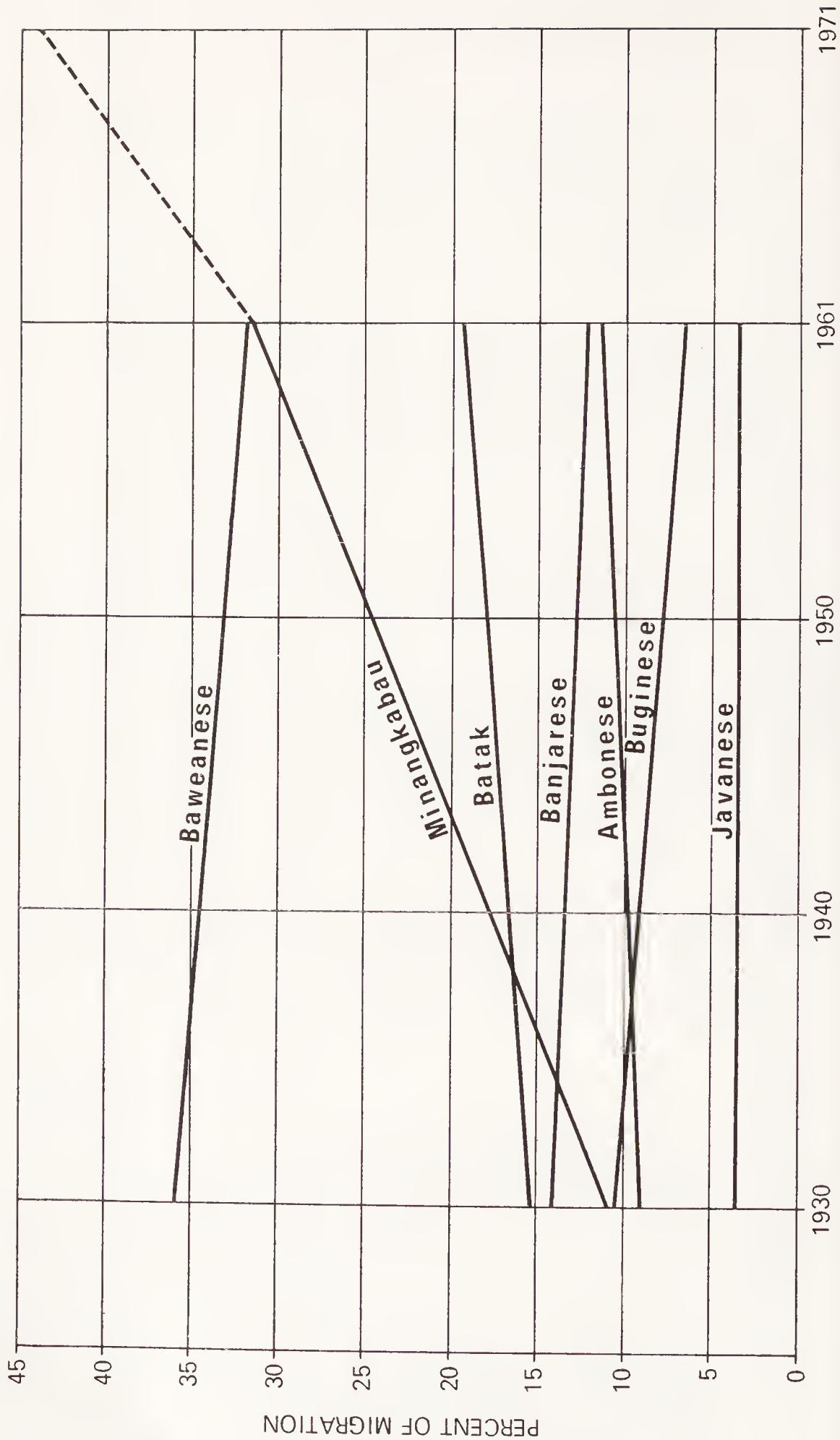
Note: 1. The total projected estimates for 1961 (Col. 3) are based on the national average of increase ratio, thus:

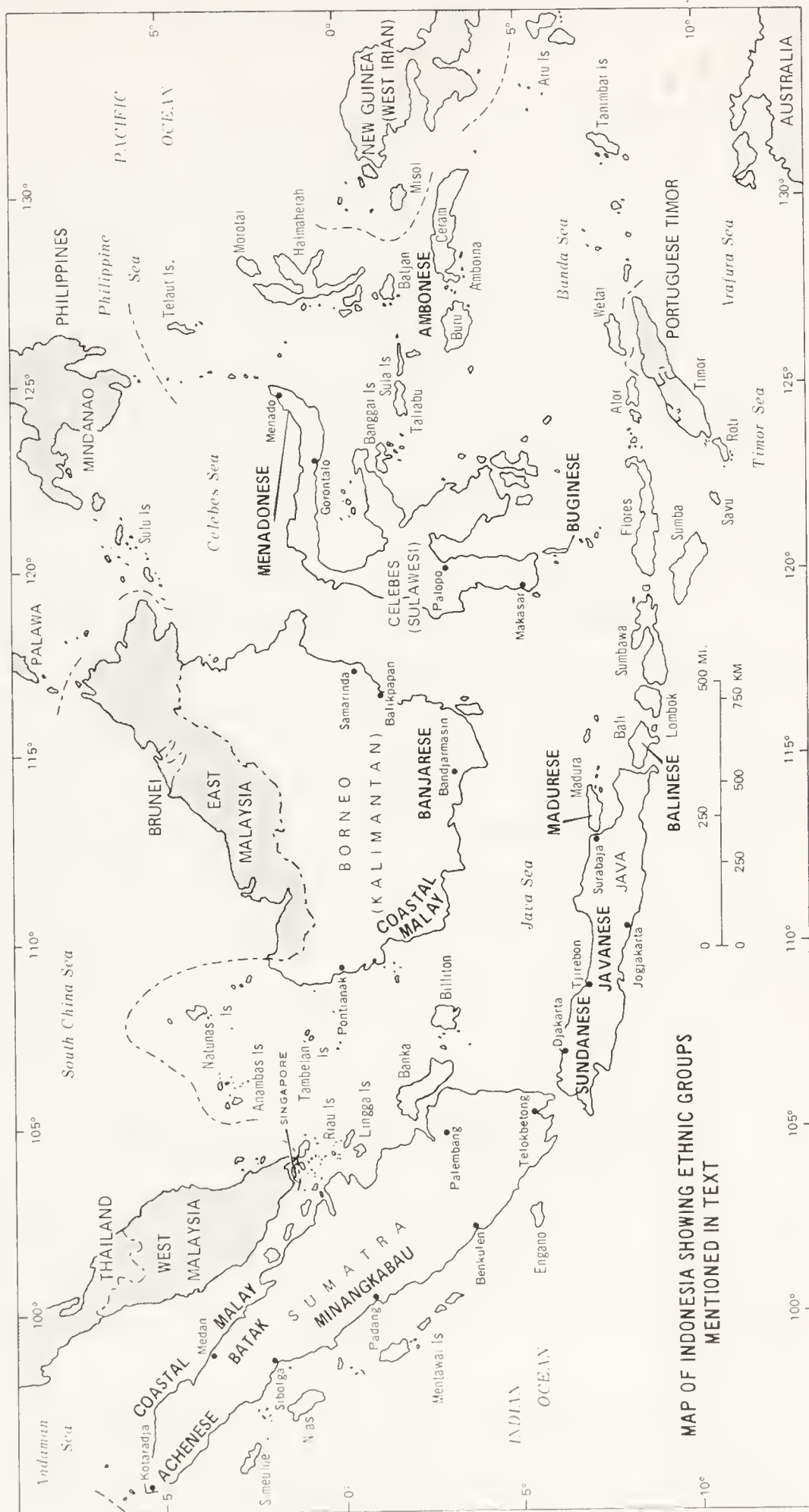
$$r = \frac{P_n (1961)}{P_o (1930)} = \frac{97,085,348}{60,727,233} = 1.5987118 \text{ (or: 1.6)}$$

- 2. Figures in Col. 4 are based on 1961 totals in respective province (or territory), as depicted from 1961 Census data.
- 3. Percentages in Col. 5 are the same as in 1930; purposely used here since there is no other way to know the existing ethnic composition in 1962 in each respective territory.
- 4. The figures for Javanese include the Sundanese and the Madurese.
- 5. Total merantau are derived from subtractions of Col. 3 and Col. 6.

Source: Volkstelling, 1930, IV, 179-180; III, 153-154; V, 20 sqq.; Sensus Penduduk 1961.

COMPARATIVE TRENDS OF MIGRATION AMONG SEVERAL ETHNIC GROUPS IN INDONESIA, 1930-1961





(a) The Ecological factor

It is easy to assume that the ecology and the edaphic quality of the soil on which any given people subsist must have had some bearing on their orientation towards migration. The propensity for migration might be negative when the ecology is suitable for them to live and the soil is fertile enough for them to subsist. On the other hand, the propensity for migration might be positive when the ecology is not suitable or the soil is not fertile or, if it is fertile, it is no longer capable of producing enough food for the growing number of people which subsist on it. When we deal with this factor it is essential to note that the level of technology in the agricultural process must be kept constant, that is basically a subsistence economy with traditional methods as has hitherto been applicable throughout Indonesia.

With the Minangkabau, the ecological factor appears to have worked quite favourably in the earlier stage, that is when the population was still small enough to depend on the produce of the land. But the ecological factor gradually became a limiting factor when the optimal stage of agricultural expansion had been reached, in that all the available arable land had been used for cultivation. As the size of the population steadily increased, a level of equilibrium would then be reached beyond which there would not be enough 'sawah' or rice land to feed the growing population. In places where the degree of disequilibrium is more acute then more people are expected to migrate. This is evident, for example, in the high plateau around Merapi Mountain; though very fertile, the intensity of merantau is nevertheless very high because of the above-mentioned situation. The intensity of merantau is on the other hand low in the agricultural area of Payakumbuh because basically the equilibrium between the capacity to produce and the amount of land and the size of the population which depends on it can still be maintained.

The crucial question here is whether, with the existing agricultural system, the people in the respective areas can rely on the given ecological environment to meet their subsistence needs. The question then can be narrowed down to one of distinguishing between the areas of 'high' (+) ecological pressure, and the areas of 'low' (—) ecological

pressure. Then by applying the statistical findings as in Tables 1 and 3, each ethnic group will be classified in terms of the 'high' (+) and 'low' (–) intensity of migration until we find a four-square matrix as shown in Table 4 below.

Although the Banjarese and Buginese are ecologically in favorable locations, in that their land is basically capable of feeding them, they have nevertheless a high intensity of migration. South Sulawesi is the homeland of the Buginese (and Makassarese) and has been known as an area of surplus rice and maize since long before the war (Jasni, 1968). The land is so fertile that it is possible to grow maize and other vegetables after rice in the same year. Rice and maize have become major agricultural exports besides cash crops such as coffee, cocoanut, tobacco, kemiri nuts, pepper, cloves, rubber and kapok.

South Kalimantan, which is the homeland of the Banjarese, has half the total area of sawah and dry land farms that South Sulawesi has, but the population is only one-third of that of South Sulawesi.³ While vegetable produce is only one twentieth, fish products of South Kalimantan exceed those of South Sulawesi. South Kalimantan has been traditionally the major exporter of dry fish shipped to various parts of Indonesia and to Singapore and Malaysia. Yet, the Banjarese and Buginese have a high intensity of migration, clearly not because of this ecological factor, but possibly because of other factors which we shall pursue later.

TABLE 4
Ecological Pressure by Intensity of Migration

Intensity of Migration	Ecological Pressure	
	High (+)	Low (–)
High (+)	Batak Minangkabau Menadonese Ambonese	Banjarese Buginese
Low (–)	Sundanese Javanese Madurese Balinese	Achenese Coastal Malay

The Achenese and Coastal Malay, who are also considered to be in favourable ecological environments have, however, a low intensity of migration. Achen has also for a long time been an area of surplus rice.⁴ The Coastal Malay were great adventurers during the international spice trade of the 14th to 18th centuries. Now they inhabit not only the entire eastern half of Sumatra and the Malay Peninsula, but also the islands between Sumatra and Kalimantan and the coastal areas all around Kalimantan. They are now quite settled and content themselves with local modes of subsistence. As coastal dwellers, they occupy themselves mainly in fishing, cocoanut tending, permanent or swidden farming and, wherever possible, wet-rice farming (Geertz, 1963: 40-41).

The Batak, Menadonese and Ambonese in the past used to live in favourable ecological surroundings as their land was capable of feeding them. The Batak (especially the Toba Batak) like their neighbors to the south (Minangkabau) and to the north (Achenese) also developed their skill in wet-rice cultivations. But, as Cunningham and Bruner (1958, 1970) have shown, the state of having plenty of rice to eat has been surpassed by the steady growth of population.

The Mendonese and Ambonese were also in the same position. During the busy days of the international spice trade up to the 18th century, these parts of Indonesia were centres of attraction because of spices. Minahasa, Ambon and the whole of the Maluku islands were prosperous. But as world market demands were shifted to coffee, tea, sugar and rubber during the V.O.C. (Dutch East India Company) and Dutch government periods, the islands were no longer productive and the people had to resort to the old swidden farming and fishing. And as wet-rice cultivation is not suitable in these places, the main staple food in Minahasa is maize and in Ambon sago.

The Sundanese, Javanese, Madurese and Balinese live in the most crowded islands in the world, such that with the existing agricultural system it is hardly possible for the land to feed them. Yet among these people the intensity of migration is very low, although as we have noted earlier, in absolute numbers they are the predominant group in the Outer Islands. Potentially, ecology is certainly a push factor for them; nonetheless they have always been reluctant to move. Presumably there must be other factors which keep them from migrating which we shall presently try to discover.

(b) *The Locational factor*

The same approach can also be applied to the locational or geographical factor. By locational factor we mean ‘the proximity to the centres of political and/or economic activities, by which it is postulated that societies which are off the centres of political and/or economic activities would have a stronger urge to migrate’. Hence, here we are concerned with the measurement of economic and political distances; that is, whether the given societies are centrally or peripherally located, using the Straits of Malacca and Java as the focal points of economic and/or political activities. This can be shown by another form of four-square matrix as in Table 5 below.

Here there is not a single society in a geographically favourable location which has high intensity of migration. These societies which are favourably located all have a low intensity of migration. They include the Sundanese, Javanese, Madurese, Balinese, Coastal Malay and Achenese. On the other hand, the societies which are not favourably located have a high intensity of migration. They include the Batak, Banjarese, Buginese, Menadonese, Ambonese and Minangkabau.

TABLE 5
Locational Pressure by Intensity of Migration

Intensity of Migration	Locational Pressure	
	High (+)	Low (—)
High (+)	Batak Banjarese Buginese Menadonese Ambonese Minangkabau	
Low (—)		Sundanese Javanese Madurese Balinese Coastal Malay Achenese

If one juxtaposes the two matrices as in Table 6, the result is interesting. First of all, the locational factor appears to be much more effective than the ecological factor. In the first instance, it seems that regardless of whether the ecological environments are favourable or not, if it is locationally favourable then the intensity of migration is (automatically) low. In other words, there is no urge for the Javanese, Sundanese, Coastal Malay, or Achenese to go somewhere else (merantau) since centres of economic and/or political activities are right at their doorsteps. To the Sundanese and Javanese especially, this locational consideration may defeat other considerations as well even though societies which have neither favourable locational nor favourable ecological environments will consequently show a strong tendency for migration. The Batak, Menadonese, Ambonese and Minangkabau appear to have been in this category, as opposed to the Buginese and Banjarese, where the ecological factor is in their favour but the locational factor is obviously against them.

These observations suggest the following paradigm:

<i>Paradigm</i>	<i>Examples</i>
1. In a situation where both ecological and locational factors are favourable, the intensity of migration is low.	Achenese, Coastal Malay
2. In a situation where both ecological and locational factors are not favourable, the intensity of migration is high.	Batak, Menadonese, Ambonese, Minangkabau
3. In a situation where the ecological factor is favourable but the locational factor is not favourable, the intensity of migration is high.	Buginese, Banjarese
4. In a situation where the ecological factor is not favourable but the locational factor is favourable, the intensity of migration is low.	Sundanese, Javanese, Madurese, Balinese

TABLE 6
Ecological Pressure and Locational Pressure
by Intensity of Migration

Intensity of Migration	Ecological Pressure		Locational Pressure	
	High (+)	Low (–)	High (+)	Low (–)
High (+)	Batak Menadonese Ambonese Minangkabau	Buginese Banjarese	Batak Banjarese Buginese Menadonese Ambonese Minangkabau	
Low (–)	Sundanese Javanese Madurese Balinese	Achenese Coastal Malay		Sundanese Javanese Madurese Balinese Achenese Coastal Malay

(c) The Economic factor

The economic factor more than any other explains much of the motivation for migration. One of the principal reasons for merantau among the Minangkabau is economic interest. In the traditional set-up of merantau, even though there was enough sawah to cater for the family's daily subsistence a young man was always urged to go merantau in order to acquire wealth so that he would be able to stand on his own feet and to support his own family when the time came. The urge for merantau for economic reasons is naturally felt more strongly when enough sawah is no longer available. Thus in places where the amount of sawah is still enough to support daily subsistence needs the propensity for merantau is low, whereas in places where the amount of sawah is no longer enough, the propensity for merantau is high (Naim, 1973a). This necessarily leads us again to the equilibrium theory, employed earlier when discussing the ecological factor for migration. In fact there is a relationship between the ecological and the economic since the

TABLE 7
Economic Pressure by Intensity of Migration

Intensity of Migration	Economic Pressure	
	High (+)	Low (–)
High (+)	Batak Minangkabau Menadonese Ambonese	Banjarese Buginese
Low (–)	Sundanese Javanese Madurese Balinese	Achenese Coastal Malay

people's economy (which is subsistence agriculture), depends so much on the grace of nature and little on human technology. Such relationships can therefore be changed when modern technology is introduced and when economic pursuits are no longer confined to agriculture but also to commerce, industry and services.

Now the matrix as in Table 7 resembles that of the ecological matrix in Table 4. The reasons given for the ecological explanations will thus also hold for the economic explanations. But there is also a question of sensitivity to migration. For the Batak, Menadonese, Ambonese and Minangkabau a slight disparity between the produce of the land and the number of people subsisting from it will cause the people to emigrate. But for the Sundanese, Javanese, Madurese and Balinese, perennial hardships in their homeland, not infrequently combined with famines because of long droughts, floods, volcanic eruptions or other causes of crop failures, will not necessarily cause the rural people to migrate – and this despite the untiring efforts of the government to facilitate their moving to the Outer Islands. Many studies on Javanese transmigration to the Outer Islands have shown that the government has had a difficult time in persuading them to move to their new homes in the Outer Islands. Yet, although it is evident that the living standard of those who transmigrated was higher than in their old villages, many eventually decided to return home to Java, to reunite with their own

kin (Bhatta, 1957: 11). Their saying, 'Mangan ora mangan asal ngumpul' (To eat or starve does not matter so long as we are together), only proves their reluctance to migrate even though there is not enough left to subsist on.

With the above economic factor analysis it is evident that one cannot thus make a hasty generalization that economic pressure alone will automatically make people move. As is clear from the findings in Table 7, we found two cases each of which runs counter to the general expectation. It appears more logical for societies with high economic pressure to have a high intensity of migration, and for societies with low economic pressure to have a low intensity of migration. However, it turns out that it is not necessarily so. We therefore need other variables to explain why the low economic pressure societies such as the Banjarese and the Buginese have a high intensity of migration, and why the extremely high economic pressure societies such as the Sundanese, Javanese, Madurese and Balinese have a low intensity of migration.

(d) The Demographic factor

The situation will become more complex as we introduce the demographic factor into the picture as another independent variable. Thus far we have tried to interpret the population growth following Wertheim's (1959) conceptual frame of reference in that it is always relative to the economic viability of a given society. Thus Minangkabau society with a population density of roughly 47 inhabitants per square km (1961 Census) can already be considered as 'over-populated' if the available means of livelihood can no longer provide for the subsistence of the existing number of people, whereas the metropolitan cities of Singapore, New York or Tokyo with a density of several thousand inhabitants per square km may not be considered 'over-populated'.

If we do not follow the above Wertheimian 'relative' concept but use the more general notion of over-population, one would hardly say that West Sumatra with a density of 47 inhabitants per square km is an over-populated area (despite the presence of economic pressure which is relative to the consumption patterns), while one would readily

admit that Java with 477 inhabitants per square km is definitely an over-populated area. In fact the highest density for any region (province) in the Outer Islands did not exceed 70 (1961 Census), whereas the average density for Java was 477 and Bali 321.

As is shown in Table 8, it is interesting to find that the high population pressure for Java and Bali does not cause the people to migrate, nor does the low population pressure for the Outer Islands deter many of their people from going merantau. We can therefore assume that population pressure as such is not a sufficient factor to account for the high or low propensity for, or intensity of, migration.

TABLE 8
Population Pressure by Intensity of Migration

Intensity of Migration	Population Pressure (KM ²)	
	High (+)	Low (—)
High (+)		Tapanuli (Batak) 38
		So. Sulawesi (Buginese) 51
		No. Sulawesi (Menadonese) 23
		So. Kalimantan (Banjarese) 39
		Maluku (Ambonese) 11
		W. Sumatra (Minangkabau) 47
Low (—)	West Java (Sundanese) 380	Achen (Achenese) 29
	Central and East Java and Madura (Javanese & Madurese) 567	Malay provinces* (Coastal Malay) 28
	Bali (Balinese) 321	

Source: Almanak Indonesia 1968, I. Biro Pusat Statistik, Jakarta, 1969, 164-165. Tabel IV. 18.

*The average for Malay provinces, including North Sumatra, Riau, Jambi, South Sumatra and West Kalimantan.

TABLE 9
Economic Pressure and Population Pressure
by Intensity of Migration

Intensity of Migration	Economic Pressure		Population Pressure	
	High (+)	Low (–)	High (+)	Low (–)
High (+)	Batak Menadonese Ambonese Minangkabau	Banjarese Buginese		Batak Buginese Menadonese Banjarese Ambonese Minangkabau
Low (–)	Sundanese Javanese Madurese Balinese	Achenese Coastal Malay	Sundanese Javanese Madurese Balinese	Achenese Coastal Malay

The picture becomes more comprehensible if we juxtapose the economic and demographic matrices together as in Table 9, to see the comparative impact of economic pressure and population pressure upon migration in each society. For the Sundanese, Javanese, Madurese and Balinese, high economic and population pressures do not seem to be the causative factors for migration. Low economic and population pressures result in a low intensity of migration for the Achenese and Coastal Malay, while low population pressure for the rest of the Outer Islands people is neither a deterrent nor an explanatory factor for their high intensity of migration. For the Batak, Menadonese, Ambonese and Minangkabau, high economic pressure is a causative factor for migration, but not for the Banjarese and Buginese.

It is to be noted, however, that though the Outer Island regions are generally low population density areas, local density variations in each of the areas must be taken into account. For, as I found in the case of West Sumatra, differential degrees of population density are quite efficacious in determining the differential degrees of the intensity of migration. In West Sumatra it is the ratio of population per hectare of sawah, or the income per capita of the rural population, which can be used as an index for the intensity of migration (Naim, 1973a).

(e) The Educational factor

Education, interestingly, has been a significant factor for migration since the early decades of this century in Indonesia. Thousands of students from various parts of Indonesia went to Java to study. However, unlike the economic factor which generally affects the whole population, migration in search of education has always been limited to a certain segment of the population only. In the beginning it was limited to the children of local chiefs, respected civil servants or successful merchants who wanted to further their studies at a higher level in Java. But after the war, when educational opportunities were open to all, thousands of students every year went to continue their studies in Java or in other big cities. The flow, however, gradually subsided in the second half of the sixties, firstly because educational facilities in the regions were much improved, and secondly, ambitions to pursue higher educational training among high school graduates have been dampened by fewer prospects of getting good jobs with the government after years of attending college.

In addition, there appears to be a differential appeal of education by ethnicity. The Batak, Menadonese, Ambonese and Minangkabau, for example, are known to have a high desire for education; in fact, dating back to pre-war times they have been more widely exposed to education than people from other areas. In the Batak area, in Minahasa and Ambon, the Christian missionaries have contributed a great deal in introducing modern schools. In Minangkabau it was the idea of 'kemajuan' (progress and advancement) advocated by young intellectuals and the Kaum Muda (Abdullah, 1971) since the early decades of this century which aroused the ambition of the young to crowd into the schools. The educational factor, for these people, has certainly been a strong push factor for migration for at least the last 50 years.

The Banjarese and Buginese, however, do not seem to have such a high motivational drive for education as to cause them to migrate, although in the fifties the number of students from South Sulawesi who went to study in Java was quite noticeable, but their number was greatly reduced by the progress made by Hasanuddin University in Ujung Pandang (Makassar) since the early sixties. The Achenese and

TABLE 10
Educational Pressure by Intensity of Migration

Intensity of Migration	Educational Pressure	
	High (+)	Low (–)
High (+)	Batak Menadonese Ambonese Minangkabau	Banjarese Businese
Low (–)		Achenese Coastal Malay Sundanese Javanese Madurese Balinese

Coastal Malays until recently had not shown a strong enough urge for educational attainment to cause many of them to go merantau for educational purposes. For the Javanese and Sundanese, obviously there was no reason for them to go elsewhere for their education since schools and all the facilities were available in Java.

The model of the matrix for the educational factor in Table 10 somehow looks similar to the locational model previously presented. The similarity lies perhaps in the fact that the centre of gravity for educational activities, like the political and commercial activities, has always been Java.

(f) The Urban attraction factor

Along with the ideas of progress through education and modernization also comes the corresponding trend towards urbanization. In fact the one cannot be had without the other. It is in towns where practically all of the ideas for progress are translated into action. It is in towns also where new job opportunities are made available. The urban attrac-

tions, therefore, were particularly strong for the educated class, since there was little that they could do if they remained in the villages, or even in the district towns. Such urban attractions were similarly popular among the traders and landless peasants for equally obvious reasons. In the rural areas markets were crowded only once or twice a week; the rest of the days were quiet. In towns markets were open every day and transactions were frequent. The opportunities for expansion in towns were also unlimited. For the landless peasants, especially in Java, moving to towns was probably the only remaining alternative when they could no longer withstand the hardship of life in the villages.⁵

With the Minangkabau, and in the same situation also with the Batak, Ambonese and Menadonese, urbanization practically means *merantau*, because centres of urban attraction are all located outside of their cultural territories. Urbanization to them is not so much moving to the nearest provincial town, but to bigger cities in other parts of the islands and Java. Their migration to bigger towns outside of their cultural territories even resulted in the retardation of urban growth in their respective home territories. The urban population growth in West Sumatra, and presumably also in Tapanuli, Ambon and Minahasa, has always been below the national average (Naim, 1973b).

The relatively high intensity of urban migration in Java did not, however, result in a high intensity of *merantau*, at least as judged from our terms of reference. Their moving to the nearest town or to bigger towns in Java was still within their cultural boundaries, and hence did not result in *merantau*. Urban attractions, and thus urban migration appears to be less obvious among the Achenese, Coastal Malay, Banjarese and Buginese and Balinese. Urban migration was noticeable, however, among their elite and successful business groups. It is interesting to note that 'kaki-lima' *merantau* (going to the place with sidewalks), which is common with the Minangkabau, is peculiarly absent among these people (Naim, 1973a).

The matrix for this urban attractions factor would then look something like the following in Table 11.

TABLE 11
Urban Attractions by Intensity of Migration

Intensity of Migration	Urban Attractions	
	High (+)	Low (—)
High (+)	Batak Ambonese Menadonese Minangkabau	Banjarese Buginese
Low (—)	Javanese Sundanese Madurese	Achenese Coastal Malay Balinese

(g) The Political unrest factor

Practically every region in Indonesia has had some experience of being subject to political unrest in one form or another in the last 50 years. The communist uprising of 1926 affected not only West Sumatra but also Banten. Then there was the wide-spread Darul Islam movement in the early days of the Republic which found strongholds in West Java, South and Central Sulawesi, South Kalimantan and Achen. In Maluku there was the separatist RMS (Republic of South Maluku) movement in the early fifties and there was the PRRI-PERMESTA rebellion in much of Sumatra and Sulawesi in the latter part of the fifties.

All of these would undoubtedly have some impact on migration. Though political unrest is not a recurrent phenomenon, when it does occur, however, it may have an immense impact on migration, such as we have seen with the Minangkabau, Menadonese, Buginese and Ambonese during the PRRI-PERMESTA or RMS rebellion (Lev and Feith, 1963).

The matrix for this political unrests factor would then look like the following Table 12.

TABLE 12
Political Unrests by Intensity of Migration

Intensity of Migration	Political Unrests	
	High (+)	Low (—)
High (+)	Buginese Minangkabau Menadonese Ambonese	Banjarese
Low (—)	Sundanese Achenese	Balinese Javanese Madurese Coastal Malay

(h) The Social-institutional factor

The question whether migration behavior is socially and culturally institutionalized in a given society may also explain much of the degree of intensity for migration. In my study of Minangkabau voluntary migration, I came to the conclusion that merantau indeed appears to have a high correlation with the fact that Minangkabau is a matrilineal society where men occupy a precarious position both within their maternal lineage house and in the house of their wife's lineage. This is because marriage does not result in the establishment of a new nuclear family separate from, or independent of, the extended family of both sides. The new unit is instead attached only to the wife's lineage, the husband being considered as a guest ('samando') whose function is mainly procreation. The presence of her husband in the wife's lineage house does not alter the basic lineal relations in the wife's lineage ('paruik'), of which the wife's eldest 'mamak' (maternal uncle) is the head ('kapalo paruik', or 'tunganai'). The husband, instead, finds his place in his maternal lineage, as an ordinary member, or perhaps also as mamak if he serves as a maternal uncle (Jasselin de Long, 1960).

His position in his maternal lineage, however, remain superficial as he does not share the fruits of the inherited family land (which is not supposed to be sold or divided up); nor is he allotted a 'bilik' (room) in the house for his own private use. His main function is to supervise and provide welfare for the lineage members. Thus, a Minangkabau man

has basically a double function which he has to serve simultaneously: as samando in his wife's lineage house (mainly for procreation), and as mamak in his maternal lineage house (mainly as supervisor and welfare provider).

Nevertheless, because of the superficial nature of these functions, a Minangkabau man feels at home in neither group; and merantau, therefore, appears to be a convenient outlet. After all, when he goes merantau, he knows for sure that his responsibilities as mamak and as samando are taken care of by other mamak in his maternal house and by the mamak of his wife in his wife's lineage house. The situation would perhaps be different if the family system were to put him in a position where his responsibilities could not be delegated, such as in the patrilineal and cognatic societies of Indonesia.

Furthermore, the upbringing of the child is also geared to these expectations. Ideally the boy, when he reaches the age of six or seven, which is the time for him to learn to read the Quran, begins to sleep in the 'surau' (village prayer house cum boarding place for the unmarried men and boys). He is discouraged from staying or sleeping at home as he gets older and he is not provided with a separate room for himself. All the rooms are allotted to female members only. When he comes of age he is encouraged to go merantau, to provide himself with experience, knowledge and enough wealth to start married life. In the meantime, there is little that he can do at home. Society will look down at him if he always stays in the village and never sets out on merantau. Merantau, therefore, already has been part of Minangkabau social life for a long time, and it certainly contributes to the high degree of migration among the Minangkabau.

We shall now see whether other societies in Indonesia have similar social institutions. The Achenese, firstly, have, according to Siegel, a similar tradition of merantau, though on a much smaller scale. But Siegel (1969: 54) credits this tradition more to economic pursuits than to anything embedded in the Achenese social system. He clearly says, 'the Achenese rantau pattern . . . should not be overly romanticized. It was not expected that a man go on the rantau in order to become a man. He 'went to the East ('dja' utimo'), or on the rantau, because he had no other means of earning a livelihood. If a man could make a satisfactory income in Pidie, he stayed home'.

The Achenese family structure, which is matrilocal, does give the man, as in Minangkabau, much ample opportunity to travel. He possesses little authority in his wife's house. The wife, conversely, does everything. But unlike in Minangkabau, this lack of a positive role within the wife's family favours the wife. As Snouck Hurgronje (1906: 361) remarks, 'the man feels himself under a deep obligation, for many reasons, to the family of his wife, his relations with whom border on dependence'. In Minangkabau this sort of obligation is diverted to his maternal family rather than to his wife's. The Achenese man, therefore, cannot be too far away and too long apart from his wife (and wife's family), for economic reasons. Though he is freed from household command he has an obligation to look after them economically. As Siegel implies, this tradition is short of being socially institutionalized. It has meaning in so far as the economic pursuit is concerned.

With the (Toba) Batak, there is, according to Cunningham (1958: 47) a tradition among the youths called 'marjajo' which means 'to go and live somewhere while working', 'to travel', or 'to wander and seek adventure'. This tradition is quite akin to the concept of 'bejalai' among the Iban of Sarawak as reported by Freeman (1955: 74) or 'bejalan' among the Pasemah and some other tribes in South Sumatra as recorded by Amran Halim.⁶ Marjajo is similar in many ways to merantau in the Minangkabau context; but marjajo is neither a rite of passage, as is bejalai with the Iban, nor an institution connected to other social factors as with the Minangkabau. It is a custom enjoyed by Batak youths to satisfy their wanderlust, often-times with little apparent purpose or direction. Petersen (1958: 268) classifies this type of migration into the 'primitive' class of migration.

There is no such tradition encountered among the Coastal Malay, though in the past they used to roam about the entire archipelago and settled in many coastal areas for economic reasons. Nor is there any trace of such a tradition in Malay songs or 'pantun', whose lyrics convey the feeling of nostalgia for home, unlike the more dramatic Minangkabau songs and pantun.⁷

The merantau tradition among the Javanese, Sundanese, Madurese and Balinese, has no roots in their social systems. In fact, they show a negative attitude toward merantau. For them it is better to stick to the homeland even though there is little left to sustain life. In contrast to the Minangkabau whose outlook is centrifugal, the Javanese and the

rest are centripetal. Java to them is everything and is the centre of the world. This outlook is strengthened by the fact that the societies are based on feudalistic class systems in which the lower classes ('wong cilik' wrongly construed by Geertz as 'abangan'), which form the greater majority of the people, feel quite secure and protected by the ruling upper class ('priyayi', as rightly construed by Geertz, 1960) (Koentjaraningrat, 1957: 2-14). The lower status groups, very much as in India, thereby always feel content to be where and what they are because they do not have to worry about outside dangers. Once they leave their societies they no longer enjoy this protection and they therefore feel insecure. This explains why the lower-class Javanese, in transmigration or estate areas in Sumatra, never feel at home there and many wished to, and did, return. The same mechanism also works for the ruling class who in fact always depend on the peasants for their rice bowl and manpower needs. Geertz (1960: 232) has the following to say in this connection:

Peasants clung to gentry princes not only for military protection but also because the latter had about them the magical-mystical aura Max Weber called charisma. Spiritual excellence was correlated with political eminence and culminated in the immobile king, the incarnation of Vishnu and Shiva, mediating in his castle at the center of the universe. Spiritual power flowed outward and downward from its royal fountainhead, attenuating as it sank through each layer in the bureaucracy, draining weakly at last into the peasant masses.

It is even more difficult for the Balinese to leave their village because of their attachment to the religious-ceremonial observations which they can perform nowhere else except in Bali. Neither have the Baweanese from the tiny island of Bawean north of Surabaya, who have statistically been proven to have the highest rate of merantau as compared to other societies in Indonesia, internalized such an institution in their social system. In fact, as Ramsay (1956: 119) explains, 'their original importation to Singapore was due to a Mr. Abrahams who conducted the largest livery stable in the city. Thus the Baweanese were originally grooms and even now represent a high proportion of the personnel of the Turf Club and training stables. They have spread into, and largely monopolized, employment as private car drivers'.

The presence of sizable numbers of Buginese and Banjarese in the rural areas of East Coast Sumatra and in Malaysia is apparently more

for economic reasons than because they are being pushed away from within by their 'adat' (tradition). Interviews with a number of elite Buginese in Makassar and Watanpone, and from information gathered from the available literature on Buginese social structure, have failed to locate the presence of a merantau tradition embedded within the Buginese social system. Similarly with the Menadonese and Ambonese, their migration to Java since prewar times has been closely connected with recruitment for military and civil service, and there is no trace in their societies of an institutionalized merantau tradition.⁸

From the above observations one can draw the conclusion that, unlike the other factors for voluntary migration commonly found in other societies, the social systemic factor for merantau is apparently unique to the Mingangkabau. Thus, though the Batak, Menadonese, Ambonese, Buginese and Banjarese have a high propensity for migration, it is evidently not because of the socio-cultural stimuli incorporated in their socio-cultural systems, but because of other factors as we have explored above. This information on the social systemic factor for migration can be placed in the matrix as shown in Table 13.

AGGREGATE FACTORS INFLUENCING MIGRATION

Of the 12 major societies that we have brought into focus in order to measure intensity of migration, six of them have a relatively high intensity of migration and the other six have a low intensity of migration. They may thus be ordered as in Table 14.

Using Table 14 as a basis, all the information concerning the various factors influencing voluntary migration is used in an aggregate multi-factor table (Table 15). The plus (+) sign indicates a positive factor for migration while the minus (—) sign indicates a negative deterrent factor for migration. The factors are divided into two groups: physical and socio-cultural. In the physical group it is evident that while the ecological factor influences most of the societies, the geographical (or locational) and demographic factors do not. In fact, the geographical factor is the most significant of the factors commonly shared by the societies with a high intensity of migration. That is to say that had all or any of them been located within reach of the economic and political

TABLE 13
Social Systemic Factor by Intensity of Migration

Intensity of Migration	Social Systemic Factor	
	High (+)	Low (—)
High (+)	Minangkabau	Batak Menadonese Ambonese Buginese Banjarese
Low (—)		Javanese Sundanese Madurese Balinese Achenese Coastal Malay

centres, they would not have migrated as is seemingly the case with societies low in intensity of migration. To put it more emphatically, had West Sumatra been located on Java or facing the Straits of Malacca, or had the political and/or economic centres been shifted to West

TABLE 14
Intensity of Migration Among 12 Major Societies in Indonesia

Intensity of Migration	Society	% of Migration*	
		1930	1961
High (+)	Minangkabau	10.9	31.6
	Batak	15.3	19.5
	Banjarese	14.2	12.2
	Buginese	10.5	6.6
	Menadonese	9.5	—
	Ambonese	9.1	11.5
Low (—)	Javanese	3.4	3.4
	Sundanese		
	Madurese		
	Balinese	0.1	1.4
	Achenese	1.1	2.6
	Coastal Malay	5.2	3.3

Note: Depicted from Tables 1 and 3.

**Figures are computed on the basis of the numbers found outside of the respective territories as in Tables 1 and 3.*

Sumatra, there is serious doubt that the Minangkabau would have preferred to go merantau. Logically, on the other hand, there is no reason why the Javanese, Sundanese and other societies with a low propensity for migration should migrate since all the economic and political activities are conducted right in their midst. It is common for the Javanese to say, 'why go to Sumatra or Borneo where there are still jungles and they are also so remote'. The geographical factor, therefore, may turn out in our analysis to be a dominant factor which strongly determines the high and the low degree of migration.

Conversely, from the demographic point of view, there is no reason why the high intensity groups should migrate as their lands are not as densely populated as most of the societies that are low in intensity of migration. The Javanese, Sundanese, Madurese, and Balinese must be expected to migrate first and foremost, and on a large scale. Yet they turn out to be the least prone to migrate. This proves that the demographic factor alone is not a sufficient factor for migration unless it is combined with the geographical factor. A combination of ecological, economic and other factors may not be sufficient to drive people to migrate unless the geographical factor is also present.

Five main factors are included in the socio-cultural group: economic, educational, urban attractions, political and socio-systemic. The economic factor, as stated earlier, is closely associated with the ecological factor, since the existing type of economy of the peasants is still overwhelmingly agricultural and directed mostly to subsistence needs. If one is to judge migration only from the economic point of view, the Javanese, Sundanese, Madurese and Balinese should have migrated earlier and on a larger scale. But as it turns out, they have been the least prone to migrate. To them the economic factor does not seem to be a sufficient reason for migration. The same factor, however, works positively for the Minangkabau, Batak, Menadonese and Ambonese to go merantau. Again it is because economic centres are not found in their immediate vicinities.

The educational factor works strongly with the Minangkabau, Batak, Menadonese and Ambonese, and less so with others, as already mentioned. For the former societies this educational factor was one of the most important push factors favouring migration, even before the war. Similarly also with the urban attraction factor. Urbanization to the Minangkabau, Batak, Menadonese and Ambonese means merantau, but

TABLE 15
Aggregate Factors for Migration

Factors for Migration										
		Physical			Socio-Cultural					No. of (+)
		Ecol-ogy	Geog-raphy	Demog-raphy	Econ-omy	Education and Higher Aspirations	Urban Attrac-tions	Political Unrest	Social System	
Intensity of Migration	Society	1	2	3	4	5	6	7	8	
High (+)	Minangkabau	+	+	—	+	+	+	+	+	7
	Batak	+	+	—	+	+	+	+	—	6
	Banjarese	—	+	—	—	—	—	—	—	1
	Buginese	—	+	—	—	—	—	+	—	2
	Mendonese	+	+	—	+	+	+	+	—	6
	Ambonese	+	+	—	+	+	+	+	—	6
Low (—)	Javanese	+	—	+	+	—	+	—	—	4
	Sundanese	+	—	+	+	—	+	+	—	5
	Madurese	+	—	+	+	—	+	—	—	4
	Balinese	+	—	+	+	—	—	—	—	3
	Achenese	—	—	—	—	—	—	+	—	1
	Coastal Malay	+	—	—	—	—	—	—	—	1

not necessarily to the Javanese, Sundanese and Madurese, at least in so far as our terms of reference go. Political unrest works as a push factor for merantau for the Minangkabau, Batak, Buginese, Menadonese and Ambonese, but not necessarily so for the Sundanese and Achenese. Finally, the social systemic factor seems to have become almost a unique property of the Minangkabau, while other societies have not adequately internalized and institutionalized such a tradition to the same extent as the Minangkabau.

To sum up the aggregate factors promoting migration, at least three relevant points must be taken into account. First is the specific combination of factors in each case. The more positively the factors are combined together, the higher is the propensity for migration (last column of Table 15). This, however, is qualified by the second point, which is the geographical factor. Although the number of positive factors in a given society is high enough to stimulate migration, if the geographical factor is in the negative (that is, if people are near economic and political centres) the drive for migration may remain low. Thirdly, and not the least important, is the social-systemic factor; that is, the incorporation and institutionalization of merantau into the socio-cultural life of a given people. From the above aggregate approach we can discern the causes for migration not only multifactorially, namely by taking into account various possible combinations of causative factors, but also cross-culturally.

TYPOLGY OF MIGRATION

An analysis of voluntary migration (merantau) would be inadequate without a typology to provide a picture of migration both as an abstraction of the empirical situation and as a means of building a theoretical concept of migration, applicable at least to Indonesian sociology. Merantau as we have defined it is a specific type of migration quite peculiar to an Indonesian situation which uses the destination (rantau) as a means (and not as a goal in itself) to secure, improve or stabilize one's position in the country of origin or the village. Though their merantau may be permanent, the orientation and the behavioural patterns of their migration remain temporary, not permanent, in character. Their outlook is always back towards the country of origin and not to the new rantau.

TABLE 16
Typology of Internal Migration in Indonesia After 1900

Typology of Internal Migration									
1	2	3	4	5	6	7			
Society	Migratory Forces at Work *	Class of Migration		Orientation of Stay		Type of Rantau		Mode of Going	
		Volun- tary	Invol- untary	Tempo- rary	Perma- nent	Urban	Rural	Indi- vidual	In Group
HIGH (+) INTENSITY OF MIGRATION									
Minangkabau	1,2,4,5,6,7,8	x		x		x		x	
Batak	1,2,4,5,6,8	x			x	x		x	
Banjarese	2,4,6	x			x	x			x
Buginese	2,4,6	x			x	x		x	
Menadonese	1,2,4,5,6,8	x			x	x		x	
Ambonese	1,2,4,5,6,8	x			x	x		x	
LOW (-) INTENSITY OF MIGRATION									
Javanese	9		x		x		x		x
Sundanese	9		x		x		x		x
Madurese	9		x		x		x		x
Balinese	9		x		x		x		x
Achenese	1,4,6	x		x				x	
Coastal Malay	1,4	x			x	x		x	x

Note: * Only Migratory forces which are at work which are entered in: (1) Ecological; (2) Geographic; (3) Demographic; (4) Economic; (5) Educational and High Aspirational; (6) Political Unrest; (7) Socio-systemic; (8) Urban Attraction; (9) Migration Policy ("transmigration").

It would not, therefore, be considered merantau if one leaves home with the idea of never returning, and makes one's destination one's permanent home, as is usually meant by 'migration'. The general typology of migration as put forward by William Petersen (1958), for example, can at best be used only as a point of reference, but not in this case as a model. Petersen fails to distinguish this vital feature of merantau whereby its 'temporariness' makes it crucially different from the general type of migration, even though he does make a distinction between 'free' and 'impelled' types of migration.

As is shown in Table 16, the typology of internal migration in Indonesia generates seven categories, of which all except the first one are dichotomized into polarized variables. Category 1 identifies the migratory forces which are at work. A new variable which leads to migration is here added, that is migration policy of the government known as 'transmigration' which refers to an impelled type of migratory force peculiar to the Javanese, Sundanese, Madurese and Balinese. Like urban attraction, transmigration is here considered as a pull factor because it is largely against the wish of the people involved.

Thus, while Petersen lists only four variables for migratory forces (ecological push, migration policy, higher aspiration and social momentum), in our typology we list nine variables (column 1 and note). And, unlike Petersen's classification which divides 'class of migration' into five different variables (primitive, forced, impelled, free and mass) we here divide it into only two variables: 'voluntary' and 'involuntary', as we feel that other variables are not empirically significant, or even applicable, to our case. As is shown under Category 2, with the exception of the Javanese, Sundanese, Madurese and Balinese whose migration is classified as 'involuntary', the rest are evidently 'voluntary' in their type of migration; and this is an important criterion for migration to be qualified as merantau.

Under Category 3 we find that besides the Minangkabau only the Achenese think of their staying in rantau as 'temporary', while the rest regard it as more or less 'permanent' in character. It is important at this juncture to stress that the dichotomization of variables here signifies a trend or emphasis rather than an either/or distinction. Thus it is just possible for a given society to show polar opposite characteristics at the same time, as in the case with the Batak type of migration in the ensuing categories. As marked in Category 4, the Batak are known to

have both urban and rural migration, while other societies have either one or the other.

In Category 5 the 'mode of going' among the Batak, Banjarese and Buginese is found to be both individually and in groups (with the Buginese frequently going away in their own 'prau'), while the Javanese, Sundanese, Madurese and Balinese go mostly in groups because of their transmigration being administered directly by the government. Those who went in groups, also settled in their new rantau (Category 6) in groups, forming or joining a settlement quite exclusive to themselves, while their occupational orientation (Category 7) in the new rantau remains conservative, that is, continuing the subsistence agriculture as they had in their old villages.

There is therefore a sequential relationship that goes from Category 4 on to Category 7. Similarly, when the 'type of rantau' is urban (as in the case with the Minangkabau, Batak, Menadonese, Ambonese and Achenese), the 'mode of going' is individual, the 'dwelling pattern in rantau' is individual and dispersed, and their 'occupation' in rantau is innovative, that is, something other than a continuation of their old subsistence agriculture in the village, such as intellectual occupations and trade.

To read the typology of migration of any one of the societies mentioned read from left to right. The typology of migration of the Minangkabau, for example, reads:

- (a) high, in fact the highest, in the intensity of their migration (Column 1);
- (b) the most complex of all, with seven migratory forces simultaneously at work (Category 1);
- (c) voluntary (Category 2);
- (d) temporary (Category 3);
- (e) Urban (Category 4);
- (f) individual (Category 5);
- (g) dispersed (Category 6);

- (h) innovative (Category 7); and
- (i) it shares with the others the characteristics listed, but it is different from the others in its particular combination of characteristics.

By following the same method we may generate typologies of the other societies.

NOTES

¹ The decision not to count ethnicity in the two censuses was political, though sociologically ethnic considerations in almost every aspect of life were just as lively as they were natural.

² Interview with Mr Suharso, head of the Demographic Studies Center, Leks, (LIPI), who also sat in the Census Committee as demographer.

³ See *Pola Dasar dan Pembangunan Lima Tahun Daerah Propinsi Kalimantan Selatan 1969-1973*, Pem.Da Kalimantan Selatan, 1969.

⁴ See *Laporan Umum Pemerintah Daerah Propinsi Daerah Istimewa Atjeh Kepada Bapak Presiden R.I. Djenderal Suharto, 30 Agustus 1968 di Banda Atjeh*, Pem. E.I. Atjeh, 1968; p. 69.

⁵ Frequent interviews made by Jakarta newspaper reporters on the life of the tramps (Ind.: *gelandangan*) in the city revealed that even though they lived under the bridge, inside or underneath freight wagons, or makeshift shelters along dirty canals, and no jobs were available to them, they still preferred to become so in the big cities than to return home. Because with the few rupiah they made from collecting empty cans, cigarette butts, or begging, every day not only could they survive but some could even send some money home.

⁶ A study of folklore among the rural people in South Sumatra, the report of which was presented in a seminar at ISEAS Singapore, 1972.

⁷ In an interview with Elly Kasim, top singer of popular Minangkabau songs, she said that of over 600 Minangkabau songs she had recorded about 90% convey the feeling of nostalgia and the longing for home of the Minangkabau in rantau.

⁸ Exhaustive literature on Buginese culture and society can be found in *Catalogus der Bibliotheek van het Kon. Instituut voor de T.L.V. van Ned. Ind. en het Ind. Gen.*, with 5 suppl., Martinus Nijhoff's, Gravenhage, 1908-1972.

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MIGRATING TO URBAN CENTRES OF UNEMPLOYMENT IN TROPICAL AFRICA

Josef Gugler

Tell the world that the unemployed are in real want,
I have nothing to eat, no house and no clothes.
This life is punishment to me.

Letter to a Lagos newspaper (Gutkind 1968:355)

Quantitative data on open urban unemployment in tropical Africa are scanty at best. Table 1 gives a summary of the information that has come to my attention. It covers only 9 out of 37 countries in the region.

Not only are there very few enumerations of open urban unemployment, but there must be serious doubt about the reliability of such information as is available.¹ The problem is well demonstrated in Iro's (1972) discussion of the 1963 youth unemployment survey in what was then Eastern Nigeria and the problems encountered in the registration of unemployed in Enugu, the former capital of that region, in 1970.

In tropical Africa open urban unemployment is only part of a wider problem: rural-urban migrants stay on in town even though their urban incomes are below their opportunity earnings in agriculture. We shall propose that a substantial proportion of those engaged in casual work,

TABLE 1

Estimates of Open Urban Unemployment in Tropical Africa

Country	Year	Town(s)	Proportion Reported Unemployed, %	Population	Source of Data	Reference
Cameroun	1962	largest city	13	men over age 14	census	Sween and Clignet (1969)
	1964	capital city	17	men over age 14	census	Clignet (1969)
Dahomey	1968	urban areas	13	men aged 15-60	deduction	Hauser (1972)
Ghana	1960	large towns	12	persons over age 14	census	Turnham (1970)
	1970	two largest cities	9	men over age 14	census	de Craft-Johnson (1974)
Ivory Coast	1963	capital city	15	adult males	survey	Sween and Clignet (1969)
Kenya	1968/69	capital city	10	adult males	survey	ILO (1972)
	1968/69	second largest city	14	adult males	survey	ILO (1972)
Nigeria	1963	27 towns	14	persons over age 14	survey	Diejomaoh and Orimalade (1971)
Sierra Leone	1966/67	urban areas	8	labor force aged 15-55	survey	Falae (1971)
	1967	capital	15	persons over age 14	survey	Levi (1971)
Tanzania	1971	?	7	?	survey	Turnham (1970)
	1971	7 towns	5	men	survey	Bienefeld and Sabot (1972)
			21	women		
Zaire	1967	capital city	13	men over age 14	survey	de Saint Moulin and Ducreux (1969)

Sources: Full references are given at end of chapter.

in employment in the unregulated sector or in petty self-employment are worse off, in real terms, than if they had stayed in / returned to the rural economy. We shall further argue that, for a number of reasons, the social cost of rural-urban migration into unemployment or underemployment is considerably higher than the private cost.

To what extent the urban unemployed constitute a threat to the established order is a matter for debate (Sween and Clignet 1969). Riots by crowds that had been lured by promises of employment to labor exchanges, to the gates of factories, or to construction sites have been a recurrent event in many cities. Mass demonstrations of unemployed occurred in a number of countries. In Brazzaville, Congo, unemployed played an active part in the demonstrations that led to the downfall of the Youlou government in 1963 (Varga 1973:271ff). In Abidjan, Ivory Coast, some 1,600 demonstrating unemployed were arrested by soldiers in 1969. They were detained for more than three months, and then dispersed to agricultural training camps run by the military in the interior (Cohen 1974:105f,155).

The unemployed in Abidjan had organized secretly in the months preceding the demonstration. In each of the two most populous divisions of the city a committee of six had been established that included representatives of five ethnic groups and presented itself as a cross-ethnic coalition of unemployed youth seeking greater opportunities in both the public and private sectors. The leadership consisted of secondary school leavers, many well-read, some eager to discuss Dumont, Fanon, and the political charisma of Mayor John Lindsay of New York (Cohen 1972). Gutkind (1973), in his study of unemployed in Ibadan, Nigeria, similarly emphasizes the emergence of a national consciousness. Of 71 men interviewed in 1966, 40 were traced again in 1971. Only seven had managed to secure permanent employment, while four had become self-employed traders or craftsmen. Of the 29 unemployed in 1971, 16 had obtained intermittent and irregular employment during the intervening five years and five had worked for political parties and received a 'cost of living allowance'.

One of the striking differences in responses between 1966 and 1971 was the increased awareness of the main political and socio-economic forces extant in 1971 from the more generalized views expressed five

years earlier. Furthermore, self-pity and faith in eventually finding a patron, or that a political party and its leaders will assist those less powerful, a view commonly shared in 1966, was replaced with cynicism such as the oft expressed view that 'the Government only serves itself'. The attitude towards the strategy for obtaining employment had changed accordingly. In 1966 most of the unemployed expressed the view that the filling out of applications, visiting offices and factories, registering with the employment exchange, knowing the 'right' person, or getting better qualifications would bring the desired reward. This attitude had changed by 1971 when a large number of the men showed little faith in these conventional methods. Their attitude was to adopt a threatening posture; they spoke of demonstrations, petitions, associations and some suggested that there should be a political party composed entirely of the unemployed and the poor. Gutkind concludes his account with the question whether five years hence a report on the unemployed will be entitled 'The Explosion of Despair'.

THE RURAL-URBAN BALANCE OF ECONOMIC OPPORTUNITIES

There is ample evidence that the rate of rural-urban migration in Tropical Africa is primarily determined by economic factors. The substantial literature on migration surveyed by Caroline Hutton (1973: 89ff) is quite consistent on this issue. The same conclusion is arrived at whether migration flows are studied or the migrants' self-image explored (Beals et al. 1967; Caldwell 1969: 88ff, 112ff; Essang and Mabawonku 1974; Goddard 1974; Rempel 1974; Sabot 1971).

Much of the literature focuses on push or pull factors in the migration decision. However, such an analysis obscures the fact that a comparison between the points of departure and destination is involved. Furthermore it encourages emphasis on a single factor. It is preferable to see the potential migrant confronted with a rural-urban balance of opportunities (Gugler 1969).

Some peasants have little choice but to move out of an agriculture that no longer provides them with bare subsistence. In a number of areas population pressure on land has become severe. Rural famine has been a common experience in the Senegal River valley for a long time (Diop 1765:58f). The last few years have witnessed mass starvation from Mauritania to Ethiopia.

In several parts of Tropical Africa plantations and commercial farms have been established over the last 80 years. With them a rural landless proletariat has emerged. Their wages and working conditions vary greatly. Frequently these are quite unattractive and the opportunity cost of migrating to urban centers is accordingly low.

For the peasant the opportunity cost of migration depends on the institutional setting (Stiglitz 1970; Knight 1972). At present an intermediate situation is probably widespread in Tropical Africa. Much land is still held communally, but migrants settle in town long-term because the difficulty of finding employment discourages voluntary job separation. Now the family often follows the migrant to town and the land they labored upon reverts to the rural community without compensation. Here then the opportunity cost of migrating amounts to average family product (net of purchased capital inputs) — insofar as there is equality within the communal system.

The distinction of this pattern from other institutional settings where the opportunity cost of migration is limited to the marginal product becomes more important as arable land gets scarcer and the difference between the marginal and the average product of rural labor increases. Such a tendency may be reversed though by the adoption of more labor intensive techniques (see Goddard 1974 on the Kano area in Nigeria).

The rural-urban income gap is much talked about, but information for Tropical Africa is rudimentary at best. For Ghana, Knight (1972) concludes that most of the evidence yielded by household income and expenditure surveys suggests that, on average, urban incomes exceed rural incomes to a small extent. On one measure, the differential was as high as 50 percent, however, on another, it was only nine percent, and indeed on a couple of measures it was actually negative. In most cases the urban advantage was found to survive an adjustment for differences

in the cost of living. There was strong evidence of considerable variation in the urban-rural income differential over time. The real earnings of African employees rose by 50 percent between 1952 and 1960, but by 1966 nearly all of this gain had been eroded by inflation. Government minimum wages followed a similar pattern but did less well; the real value of the minimum wage in 1966 being 73 percent of the 1952 level. In agriculture the trends were very different between food and cocoa farmers. The value of food production was static throughout the 1950's, but by 1966 had risen to 136 percent of the 1952 level. In contrast cocoa income per rural household showed a cyclical pattern; it repeatedly declined then recovered to the 1952 level, but in 1966 stood at only 37 percent of that level.

For Nigeria Byerlee (1973:16) notes that most rural-urban comparisons reveal a substantial and widening rural-urban income differential with rural incomes less than half of urban incomes. He points out, however, that the usual basis of comparison is between some index of urban wage rates and a crude index of agricultural incomes such as prices received by farmers for export crops. More rigorous measures of rural incomes revealed that rural incomes in northern Nigeria were about 80 percent of the government's unskilled wage rate.

For Kenya on the other hand Rempel (personal communication) reports a rather big gap between the formal rural and the formal urban sector. The average incomes from wages of Africans over the 1964/1968 period were fully twice as high in the eight main towns as in the remainder of the country.

Clearly we do not have the data to compare the incomes of the most marginal rural categories with the wages the urban economy may seem to promise, let alone estimate the size of these categories. We may speculate that trends towards increasing marginalization of certain groups or of entire regions will drastically lower the opportunity cost of migration.

While information on rural-urban income gaps is less conclusive than commonly assumed, it is quite obvious that the more important urban centers offer the better opportunities for education and training. Furthermore, a whole range of amenities not available in rural areas is found in the towns, especially in the capital cities. Such amenities as

public housing, pipe-borne water, electricity, and medical care are typically heavily subsidized.

School leavers have at times been thought to constitute a particular problem. The type of education they obtained, it was suggested, did not equip them for agricultural pursuits and, furthermore, made them adverse to farming. And, indeed, the more educated are more likely to move in search of urban employment — a fact that is explained in terms of rational economic calculation: Rempel (1974) shows for Kenya that the return realized for an additional year of education is higher in the towns than in the rural areas, and the probability of being selected from a given stock of unemployed varies directly with the level of education of the unemployed. The great majority of unemployed male school leavers interviewed in Kampala and Jinja, Uganda, by Hutton (1973: 70ff) were primarily rural in their orientation in that they had chosen to look for urban employment as a temporary expedient because opportunities available to them in their rural homes were inadequate. Her study of a rural development scheme in western Uganda, specifically designed to attract school leavers, showed them committed to an agriculture that holds out prospects of reasonable cash incomes in relation to the level of urban wages and the chances of securing them (Hutton 1973:228ff). Where urban opportunities are perceived to be significantly better than rural opportunities — given a certain level of education — no change in school syllabi will inculcate a commitment to agriculture.

Some observers rave about the attractions of the city's bright lights, but it appears that immigrants make very little use of such urban facilities as cinemas, dance halls and bars (Rempel and Harris *nd*). Whether such neglect of what strikes the fancy of so many foreign visitors is for lack of taste or cash is of no import.

PLAYING THE URBAN ECONOMY GAME

Continued rapid urban growth throughout Tropical Africa indicates that many rural dwellers find it advantageous to move to the cities.

Given the relative sizes of the rural and the urban sector, considerable potential for rural-urban migration remains in every country. The migration flow appears to swell whenever urban employment opportunities improve, e.g. when the Kenya government, employers and trade-unions agreed to increase numbers employed by a set percentage in 1964 and 1970. The entire body of aspirants for urban employment may be visualized as an iceberg; a few show as urban unemployed, the bulk are waiting in the rural areas.³ But why should migration continue in the face of widespread urban unemployment? Why do so many unemployed stay on in town instead of returning to rural areas where they have claims to land or opportunities for employment?

Some authors, while accepting that migrants are primarily motivated by economic considerations, suggest that they fail to appreciate how difficult it has become to secure urban employment (Hopkins 1973: 241f). Such an interpretation would have further to assume that these migrants, when faced with the disappointing realities of the urban scene, have reason not to return to their rural home. Grindal (1973), in his account of a group of Northern Ghanaian immigrants in Accra, suggests that they had indeed been misled by stories they had heard from former migrants who had returned to their home area. In these stories the South was described as a land of great wealth where the buildings are many storeys high, where the people ride either in cars or on bicycles, where the 'social life' abounds, and where one can earn the money necessary to buy such things as bicycles, clothing, and other articles of finery. Such myths were perpetuated by returned migrants who wished to convey to others a positive image of themselves and their experiences. They talked much less about the problems they encountered in the cities of the South. In contrast to the expectations thus raised, the migrant's first contact with Southern urban life was an unexpected and often shattering experience. Many migrants were then forced by pride to remain in the South to spare themselves the humiliation of returning home in poverty.

However, studies that are not limited to a small ethnic group tell a different story. Caldwell's (1969:120ff) survey in predominantly immigrant areas of Accra-Tema, Sekondi-Takoradi, Cape Coast and Kumasi, Ghana, gives little support to the contention that rural-urban

migrants come with false expectations. Nearly two-thirds of the immigrants interviewed stated that life in the town was just like they thought it would be. Among those who found their impressions markedly astray, almost half had been too apprehensive of urban conditions. Those who had been disappointed numbered only about one-sixth of all interviewed. The unexpected deficiencies of the town divided almost evenly into lesser economic opportunity than expected and greater social problems or insufficient facilities to cope with problems of urban living. Three quarters of the unemployed men Hutton (1973:61f) interviewed in Kampala and Jinja, said that they planned to leave town if they could not find work, but for the great majority this was only a temporary measure; only 11 percent of all the unemployed interviewed anticipated going home for good.

That potential migrants act in accordance with accurate information can be further demonstrated in cases where conditions in alternate employment areas are modified significantly. Forty years ago supply of labor from Ruanda and Burundi to Uganda varied with changes in the Congo franc-sterling exchange rate (Powesland 1954:49f). In the 1960's migrants from Upper Volta increasingly gave preference to the Ivory Coast over Ghana as the economic fortunes of the two countries changed (Songre 1973).

We hold that most migrants have a pretty accurate idea what to expect and that their migration decision is rational in economic terms. Joining the urban unemployed they participate in a lottery, play the urban economy game (Gugler 1969). There is a considerable element of chance in this game because much of the hiring is haphazard. And the game is very serious: rural income is foregone, costs are incurred in migration, severe hardship is experienced in urban unemployment. But new migrants keep joining in the 'gold rush' prospecting for urban employment.

THE DECISION TO SEARCH FOR URBAN EMPLOYMENT

The proposition that potential migrants take into account not only rural-urban real income differentials, but also the probability of securing urban employment, has been incorporated into an econometric model (Harris and Todaro 1968, Todaro 1969, Harris and Todaro 1970). In this model the expected urban wage is defined:

$$W_u^e = \frac{\bar{W}_M N_M}{N_u},$$

where the expected real wage in the urban sector, W_u^e , is equal to the real minimum wage \bar{W}_M adjusted for the proportion of the total urban labor force (permanent urban plus migrants, denoted as N_u) actually employed, N_M/N_u . The probability of obtaining urban employment is thus defined as the proportion of the urban labor actually employed. The argument has been accepted variously (Eicher et al. 1970, Singer 1970).

However, the definition is predicated on the assumption that a *periodic random job selection process* from the total urban labor force occurs whenever the number of available jobs is exceeded by the number of job seekers. It assumes then that all urban jobs are reallocated periodically, that such reallocation occurs at random, and that the new arrival can sustain himself until his turn comes. The approach thus defines the probability of securing urban employment in a highly unrealistic manner, and it focuses on this probability to the exclusion of a number of other elements that enter into the decision to initiate/continue the search for urban employment (Gugler 1971).

First, the ratio of urban employed to total urban labor force is an inaccurate (and overly optimistic) measure of employment opportunities for new arrivals. A limiting case will illustrate the point. If no jobs were created, if jobs vacated by retirement were abolished, and if all other jobs were permanently held, then new arrivals would have no access to jobs and migration would not be rational no matter what the

unemployment rate. This case may not be far from real life in some countries in Tropical Africa where employment is stationary or shrinking and the employed cling to their jobs. The relevant measure then is the ratio of jobs becoming available over a given period of time (new jobs + jobs vacated) to job seekers (stock of unemployed + involuntarily separated + urban-reared joining the labor force + new immigrants).

Second, access to such jobs as become available varies according to education and training, work experience, urban experience, sex, age, ethnic group, and/or religion (cf Hart 1974 on occupational clustering).

Third, we have to face the issue of the migrant's time horizon. Over what time period does he seek to maximize income? If the migrant anticipates holding on to his job for a long time, once he has secured it, then it is rational for him to accept rather low odds of finding employment. Thus, if maximization over a working life is sought, the odds of obtaining a permanent job that are acceptable to a young man may not be attractive to a middle-aged man. However, a middle-aged man may nevertheless take his chances on such odds — if he has a different time horizon, e.g. if he takes into account the prospects in education, training, and employment for his children.

Fourth, whatever the probable returns, they are not guaranteed; for most migrants a considerable element of chance is involved. But risk preference may well vary among different categories of migrants.

Finally, but most importantly, migrants have to survive until they find employment — irrespective of the situation on the job market, of their access to it, of their time horizon, and of their risk preference. About half of the unemployed men interviewed by Hutton (1973: 53ff) in Uganda stayed with relatives, another 30 percent with friends; only two percent had no place to stay. However, all were anxious about food (except for a few staying with their brothers) and some were plainly weak and malnourished. In a survey of 1,091 post-Independence male immigrants in the eight biggest Kenyan towns approximately 80 to 85 percent reported receiving some form of assistance with housing and food on first arrival in town. Over two-thirds of those unemployed during the fourth quarter after migration had received free

food throughout that three month period, but very few had been offered free lodging (Harris and Rempel nd).

The extent to which not only relatives but also friends provide assistance is impressive, but as time goes by an increasing proportion of immigrants have to fend for themselves. If they have not been able to secure employment they are forced to look for casual work, to accept employment well below the legal minimum wage or to engage in petty self-employment. In a survey in the urban areas of Tanzania, in 1971, half of the street vendors who were prepared to state their income (66 percent), reported earnings below the minimum wage. About a quarter of both, street vendors and domestic servants, said that they were looking for work (Bienefeld 1974). For obvious reasons there is little information about those unemployed who get involved in illegal activities and the attendant risks. In a squatment of about 2,000 people in Nairobi, Kenya, at least 50 people a month were arrested on charges of illegally brewing, possessing or selling beer; 40 percent of the men and 63 percent of the women interviewed reported brewing beer for sale (Ross 1973:149,137).⁴

Kilby (1969:275ff) has suggested that every increase in the wage rates in the regulated sector will tend to depress the ruling wage in the unregulated sector and to increase unemployment. These consequences follow because employment in the regulated sector becomes more attractive for the potential migrant, and because his move is facilitated as the capacity of those employed in that sector to support him increases. Kilby reports for Nigeria that the real wage rate in the regulated sector rose by 50 percent between 1953 and 1964, while it fell in the unregulated sector.

The migrant may well accept a standard of living below that he had in the rural economy, hoping to be better off in the future. As long as the unregulated urban sector allows the barest survival, the earnings in this sector can be ever more widely spread over a growing army of job seekers. This sector acts as a sponge disguising unemployment while both marginal product and income decrease.⁵

THE COST OF MIGRATING INTO URBAN UNEMPLOYMENT AND UNDEREMPLOYMENT

Rural income foregone constitutes the main element in the private cost of migration. The school leaver not yet integrated into rural production is therefore a likely candidate for migration. Loss in output from agriculture is low where migration is seasonal or where departure is timed to occur during the slack season and employment is found before the next planting or harvesting period. Transport to town appears to be only a minor cost, for Kenya an average of Ksh 11s., or about a day's pay for unskilled labor, has been computed (Collier and Rempel *nd*). Private costs are reduced to the extent that the job-seeker finds some earnings in marginal employment or self-employment.

The social cost of migration contains three major elements, in addition to the private cost. First of all, where private cost is reduced through earnings from employment in the unregulated sector or petty self-employment, the marginal product of such activity may be considerably lower than these earnings. While new entrants are able to secure some share of business, the aggregate of goods and services provided increases very little.

Second, urban amenities constitute a social cost to the extent that they are subsidized by government and/or provided by people other than the migrant. Housing, urban transport and sewerage stand out as three services that are expensive in urban agglomerations, but cheap or free in rural areas. Where squatting impedes optimal urban land use it similarly contributes to social cost. Pipe-borne water, electricity and medical services are cheaper to provide in urban population concentrations than to a dispersed rural population, but they are available to a lesser extent, or not at all, to farmers, while being heavily subsidized in town.

Finally, the impact of migration on the rural sector remains a matter for conjecture. The rural consequences of rural-urban migration have been hotly debated for 40 years. In a critical review of that discussion we concluded that whether those left behind were better off depended

for one thing on the control they were able to exert over the migrant's income (Gugler 1968:474ff). With the unemployed in town such transfers as are made go from the rural home to his support. This analysis does not allow for the improvement in the land/man ratio where arable land is scarce, but we hesitate to see a gain to the rural community from the departure of its able-bodied and best educated members — leaving their dependents behind as they search for urban employment.

An evaluation of the impact of rural-urban migration on rural development has to take into account that the rural sector loses the best educated young men while such migration drains off only part of the natural population increase. A decreasing land/labor ratio calls for change, but potential innovators are moving away. Again, the situation is more unfavorable with unemployed migrants than with their more fortunate peers to the extent that the latter take their dependents out of the rural sector. Speculative as these considerations are, two observers have emphasized the negative impact of labor migration on rural development at a time when migrants had jobs waiting for them. Gulliver (1955:34f, 41f) stressed the serious and pernicious effect of labor migration for the Ngoni of Southern Tanzania: the recourse to migration as a source of income sapped the efforts and will of the men to work more diligently at home in developing the resources of their own fields and country; it had therefore a depressing effect on the rural economy in general. Skinner (1965:70f) reported that efforts to stimulate the production of cotton in the Mossi area of Upper Volta in the early 1920's and 1930's failed because cotton production did not harmonize with the established pattern of seasonal migration.⁶

PROSPECTS FOR RURAL-URBAN MIGRATION IN TROPICAL AFRICA

Trying to peer into the future I would suggest that we explore the following propositions:

1. some regions are still somewhat secluded from the urban labor market (Sabot 1971) and may yet come to join the rural-urban movement;

2. given a high rate of population increase, land shortages will become a more common experience;
3. the supply price of labor to the urban sector is shifting from the average to the marginal product of labor in many parts of Tropical Africa with the dissolution of communal control over land;
4. increased numbers of urban unemployed and declining rates of labor turnover have presumably combined to discourage rural-urban migration;
5. the chances of finding employment deteriorate with length of unemployment as younger and better educated immigrants arrive, but it may be difficult for some of the long-term unemployed/underemployed to return to their rural area of origin;
6. migrants increasingly seek to maximize income over a working life, hence it is economically rational for them to accept rather low odds of finding employment, but it is difficult to subsist on kin and friends in extended unemployment.

POLICY⁷

We probably all agree that a long-range policy to stem the tide of rural-urban migration, and the rise in urban unemployment and underemployment to which it contributes, must pursue both, a more equal rural-urban balance of economic opportunities, and a reversal of present trends towards the marginalization of parts of the rural population and entire regions.⁸ Are there any effective short-run palliatives, other than migration controls?

1. Measures affecting the expectation of employment: further reduction in labor turnover? less publicity given to the creation of new jobs; information about differential employment opportunities? opening up urban employment opportunities to women?⁹

2. Measures affecting the migrants' ability to subsist in unemployment: a per capita 'unemployment tax' which could be levied on heads of households for every unemployed male dependent age 15-40 who is not attending school or in some other way incapacitated (Kilby 1969: 304)? barring unemployed from subsidized urban services? increases in

social security benefits for the employed that would reduce their reliance on the extended family system and hence their propensity to support unemployed kin?

3. Measures affecting long-term waiting in unemployment and underemployment: recruiting for urban vacancies in the rural areas rather than at the factory gates? assistance to long-term unemployed to return to their rural homes? enforced repatriation of unemployed to their home areas or to farm settlements as practiced in Tanzania?

We propose that the locale of recruitment be shifted to the rural areas. The feasibility of a system that allocates employment in the regulated sector at the rural end needs to be explored. We suggest that employers in the regulated sector, both public and private, be required to recruit through rural-located labor exchanges.¹⁰ This is *not a proposal for control of movement but for the allocation of employment in the regulated sector in such a way as to obviate the necessity for job seekers to locate near potential employers*. Peasants and school leavers alike would be free to come to town to try their chance, but there would be less incentive for such migration because most of the jobs in the regulated sector would be offered to applicants in the rural areas.¹¹

An appraisal of this proposal has to balance the problems that may be anticipated in both design and execution with the present haphazard recruiting procedures of employers and the incidence of nepotism and corruption among their agents, and with government attempts to deport the unemployed from the cities. The informal sector may well be strengthened by the withdrawal of participants who scour it for what little it may contribute to their subsistence while they search for employment.

NOTES

¹ An alternative method used to estimate urban unemployment and underemployment compares urban population with the labor force employed in enu-

merated firms and government establishments. Given high rates of urban population growth and much slower growth — or no growth — of employment in the enumerated sector, the results of such an approach are quite extraordinary. However, there is no justification for the implicit assumption that all employed or self-employed in the non-enumerated sector are underemployed in terms of either productivity or income; and there is no evidence for thus characterizing all net additions to this sector.

The non-enumerated sector is here defined by the fact that employment is not enumerated. We will refer to the unregulated sector in terms of the lack of regulation of wages by government, wage commissions, or collective bargaining. The informal sector is less precisely circumscribed as that part of manufacturing and services that is neglected, if not discriminated against outright, in the formulation and execution of economic policy. There is considerable overlap among the three sectors so delineated but they do not coincide.

² For a study establishing the relationship between patterns of land tenure and rates of rural emigration in Latin America see Shaw (1974).

³ Callaway's (1967) report that nearly two thirds of the unemployed male school leavers encountered in a household survey in Ibadan had been employed for a year or longer has to be viewed in light of the fact that half of the unemployed school leavers had their origins in Ibadan or its surrounding area and had presumably been able to stay at their homes throughout. Given the high degree of urbanization in Yoruba society, an unusually high proportion of aspirants for urban employment have a home base in town. Elsewhere in Tropical Africa, the urban unemployed are more dependent on support from relatives and friends. Three quarters of the unemployed men interviewed by Hutton (1973:48ff) in Uganda had spent less than a year actively looking for work. The period spent without employment had been longer for a number of them, but they had been away from town since leaving their last job, either on visits home to rest or to attend to family matters, or because they could not support themselves for too long in town.

⁴ Several studies in South America show the unemployed to be townsmen rather than migrants (see the forthcoming volume *Recent Research in Rural-Urban Migration*, edited by John Harris, MIT Press). Similar patterns may emerge in Tropical Africa as well. We would suggest that such findings do not demonstrate that rural-urban migration is unrelated to unemployment, but rather that migrants end up having to accept any opportunity that allows them the barest survival, or else they have to retreat to the rural areas. Townsmen are more likely to find extended support from kin that are both closer to them and better established in the urban economy.

⁵ The informal sector has been discriminated against in the past. This was especially the case where white settler communities affected colonial policy. Recently a mission to Kenya under the ILO World Employment Program has emphasized that this sector provides a wide range of low-cost, labor-intensive, competitive goods and services, and has recommended a number of measures to promote it (ILO 1972:21f, 223ff). This issue need not detain us here where we are concerned with job seekers who are in marginal employment and self-employ-

ment not as an alternative to farming, but as a source of subsistence allowing them to extend the period of trying to establish such an alternative.

⁶ In the case of the Ivory Coast where more than half the wage earners in the 'modern' sector were foreign nationals as recently as 1968 (Roussel 1971), a sizeable proportion of the unemployed are presumably also foreigners. The negative consequences of their migration on the rural sector are a cost to their home country, most prominently Upper Volta.

⁷ For a critical review of policy options see Todaro (1971).

⁸ A discussion of policies for rural development is outside the scope of this paper. As a transition policy Ghai (1971) pleads for an extensive program of rural public works for Kenya. In terms of long-run rural development the case of Aiyetoro, the Nigerian village that industrialized because of its geographic and political isolation, provides food for thought (Barrett 1971).

⁹ Such a policy would reduce employment opportunities for men and hence discourage them from migrating. It is not likely to attract many more women, given the numbers of women already in urban residence who would have considerable advantages over recent immigrants in competing for employment.

¹⁰ A scheme on such lines was in operation for over two decades in Mexico to select the *braceros*. Under the *bracero* program Medicans were contracted for work on United States farms. The Mexican Bureau of Migratory Farm Labor Affairs assigned quotas to the governors of certain states. The governor then allocated the state's quota among the various municipalities. The criterion supposedly used as a basis for quota allotments to states and municipalities was that of economic condition, with areas of chronic unemployment being assigned larger quotas. In some of the small municipalities a game of chance often determined who, among the eligible aspirants, received the permit (Craig 1971: 132f).

¹¹ There would need to be provision for a share of employment to be offered to the urban born and reared.

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URBANIZATION AND MIGRATION IN AN INDIGENOUS CITY: The Case of Addis Ababa

J John Palen

The distinction between preindustrial and industrial cities has received considerable attention from sociologists. According to the classical view, urbanism as a way of life in industrial cities prizes rationalism, secularism, mobility, diversity, and innovation. As Wirth expressed it: 'The larger, the more densely populated, the more heterogeneous the community, the more accentuated the characteristics associated with urbanism will be' (Wirth, 1938: 9). Sjoberg, on the contrary, has suggested that many factors that have been associated with cities *sui generis* are probably only generic to industrial cities. The preindustrial city's functions are primarily governmental and religious; only secondarily is the city a commercial hub, and barely at all, even today, is it the loci for industry. In the preindustrial city particularism rather than universalism is the norm (Sjoberg, 1955: 438-445).

The distinction between industrial and preindustrial cities is also apparent in their ecological spatial structure. Best known of the industrial city models is Burgess's concentric zonal hypothesis, which, in a bastardized form, has been taught to generations of college students (Burgess, 1924: 85-97). It, as all industrial city models, assumes patterned differentiation of land use and growth radiating from center toward periphery.

On the other hand, in discussing contemporary preindustrial cities,

particularly those in the developing Third World, land use patterns are far less precise, with the major distinction invariably being between the low density European founded sector, with its straight streets, open spaces, and detached housing; and the indigenous native quarter, with its high densities, congestion, winding streets, and buildings of native design and materials (Hance, 1970).

This paper discusses an important variation of the contemporary modernizing preindustrial city, a preindustrial city whose social and spatial characteristics have not been significantly affected or altered by a colonial heritage. The city studied, Addis Ababa, has a unique history among African cities, for although it is clearly a primate city and was founded at the height of the colonial period — 1886 — it was not really affected spatially by European colonialism. From the start it was a totally indigenous Ethiopian creation. Admittedly, much of the data is essentially descriptive, but, as was the case when data again began to be available for Chinese cities, one rejoices in obtaining any data in an area where previously it has been nonexistent or unavailable.

Estimates place the population of Ethiopia at roughly 26 million, with a crude rate of natural increase of approximately 2.6 percent (African Population Conference, 1971: 16).¹ The per capita income in 1975 dollars is roughly US \$75 per year. The country has a centuries old tradition of isolation, with the mountains, which in the past provided an all but impregnable barrier to invasion, today forming an almost equally difficult barrier to trade and communication. The

TABLE 1
Vital Statistics: Addis Ababa, 1967

	Recorded (per thousand)	Adjusted (per thousand)
Crude Birth Rate	37	43
Infant Mortality Rate	67	165-175
Crude Death Rate	8.9	19-20
Rate of Natural Increase	28.1	23-24
Total Fertility Rate	3.98	4.6
Gross Reproduction Rate	1.94	2.2-2.3

majority of the country's population is not within a day's journey of any road, while not more than one-fifth of the population has any access to radio receivers (*Africa*, 1971: 38). The majority of the population is not on a money economy.

SPATIAL STRUCTURE

Addis Ababa, the capital city, is estimated to have a 1975 population in excess of 1 million, while the country as a whole has only 4.7 per cent of its population in places of 20,000 or more. The second largest city, Asmara, which is in the center of Eritrean liberation attempts, has a population of 189,000. There are no other centers in the country with a population over 60,000. Addis Ababa is often referred to as the capital of Africa due to its history of independence and, more importantly, to its housing both the United Nations Economic Commission for Africa and the headquarters of the Organization of African Unity. In Sub-Saharan Black Africa only Lagos, Ibadan, Kinshasa, and Accra rival Addis Ababa in size. Addis Ababa did not come into existence as a result of gradual growth, but rather was established as a relatively populous center as the result of Emperor Menilik II's decision to settle his temporary capital on the site. The city site is also unique in both being over 8,000 feet in elevation, and in not having a tropical climate.

In terms of spatial ecology the city was originally organized as an armed feudal camp with each of the major nobles (ras) allotted quarters known as sefers. Each sefer was a miniature of the royal compound or 'guebi' in that each sefer housed the major noble plus his family, his servants, his slaves, and his troops. Because of this mixture in each area no distinctly upper and lower class areas developed within the city. Unlike African cities founded by European colonialists there was no division of the city between indigenous and European sectors. There is no clearly defined area of elite residence. Within districts higher and lower status residents are intermixed.

Early city growth followed an irregular curve, with the population

shrinking to a residue of women, children, and priests when the Emperor was out warring or raiding, and swelling when the feudal warlords returned. By 1910 the permanent rainy season population was approximately 60,000. With the arrival of soldiers and caravans the total would go up to 80,000 or even 100,000 (Pankhurst, 1965: 75). During this period it was not uncommon for a chief, governor, or regional king visiting the city to bring 30,000 to 50,000 persons, including troops, household, and slaves, with him (Merab, 1921-1923: 113).

Docteur Merab, writing about pre-World War One Addis Ababa, commented that the city resembled nothing so much as an immense floating camp (Merab: 11). Today much of this early non-urban character still remains; there are relatively few modern high rise buildings, while the ubiquitous eucalyptus trees and clusters of native built houses give the city a rural appearance. In spite of its million plus population there are barely a dozen named streets in the city, and absolutely no sanitary sewers, even for hospitals, hotels, or apartment buildings.

Since the 1930s city growth has been fairly consistent. Following the Italian invasion of 1935 the administrative census of 1938 estimated the total city population at 140,000, of which 30,000 were Italians. The Italian *Guida* of this period quotes a population of 300,000 but this is based on an area of 7,000 square kilometers and the population estimate is certainly too high (*Guida del 'Africa Orientale*, 1938: 474). During their five year occupation the Italians created on the north end of the city a new market center, the 'piazza' between the Emperor's palace and the traditional market, and on the southern end attempted an Italian residential district, which is now one of the prime residential areas despite its propinquity to the airport.

Not entirely reliable census figures put the 1961 population of the city at 455,550 and the 1967 population at 683,530. The city is estimated by the author to presently have just over a million inhabitants and to be growing at a rate of seven percent per year, which will double the population in 10-11 years. At the present estimated rate of growth the city will have 1,577,000 persons in 1980.

The municipality covers a land area of some 218 square kilometers. The radius of the city is roughly seven to nine kilometers, with the

most heavily built-up area of the city approximately in the geographical center. There is no central business district (CBD) as such. As of 1975 the city still approximated the structural pattern of a preindustrial city. Growth and social class distributional models appropriate to American or industrial nation cities do not apply. Neither does Addis Ababa replicate the experience or structure of other African cities having a colonial influence.

CITY FUNCTION

Addis Ababa, in terms of functional base, is still primarily a political and administrative center. All major Ethiopian government agencies, foreign embassies, as well as the United Nations Economic Commission for Africa and the Organization of African Unity, are found in the capital. During the last decade there have been notable increases in the transportation, communications, manufacturing, and educational sectors. Retail trade is also growing but it is still oriented largely to Addis Ababa. Industrialization is still at a relatively infant stage. Berlan estimated that as of 1960 there was an economically active population of 61,000, of whom 50,000 were males and 10,000 females. Of these, 15,200 were in industry and construction, 2,500 in transport and communication, 8,000 in commerce and finance (8,000 in retail sales), 13,000 were civil servants, 15,000 house servants (clearly an underestimate), and 4,650 were miscellaneous (Berlan, 1963: 174).

Administratively, the city is divided into five sub-municipalities: Northern, Eastern, Southern, Western, and Central; each of these sub-municipalities is administered by a governor. The city is further divided into 10 districts or werdas. The ten districts are Arada, Gefersa, Gulele, Intoto, Mehakelegna, Yeka, Bole, Lideta, Keranio, and Teklehaymanot. The districts nearest the city center — Arada, Mehakelegna, Teklehaymanot — have the most pronounced urban characteristics. Even so there is still some vacant land in these districts. At the other extreme the districts of Intoto, Yeka, and Keranio are sparsely populated and con-

tain much vacant land. Housing, particularly in outlying areas, tends to be found in clumps rather than spread evenly over the terrain. Some of the sullyng land, particularly in Intoto and parts of Yeka, is rough and relatively inaccessible and remains far more rural than urban. As of 1975 over a quarter of the 'city' is still rural.

For this reason density figures for the municipality as a whole are of little value. In 1961, for example, the average density of population for the entire city was 2,035 per square kilometer, but this included a tremendous range in district densities, from 6,868 in Arada to 432 in Intoto. If the three most rural districts of Yeka, Keranio, and Intoto are excluded the average density of the remainder of the city — which included 86 percent of the total population — was 3,920 per square kilometer (Addis Ababa, n.d.: 11). The comparative density of Washington, D.C. was 5,200; Chicago 7,500; Lagos 2,925; and Darak 1,855.

CHARACTERISTICS OF POPULATION

Few of the present urban dwellers are long-term urbanites, with immigration being the largest contributor to city growth. Only 44 percent

TABLE 2
Number of In-migrants to Addis Ababa 1961-1967

Year	In-migrants* from year still present in 1967	In-migrants from year deceased or out-migrated prior to 1967 Census	Total Yearly in-migrants by year
1961-62	18,700	7,700	26,400
1962-63	21,100	7,200	28,300
1963-64	24,300	6,000	30,300
1964-65	27,800	4,600	32,400
1965-66	31,800	2,900	39,700
1966-67	36,400	800	37,200
Total 1961-67	160,100	29,200	194,300

**Adjusted for time mis-reporting.*

of the Addis Ababa population were born in the city and even this figure gives a somewhat misleading impression since over 70 percent of those classified as born in the city are children below 15 years of age. Over three-quarters of the adult population was born outside the city, with second generation urbanites only a small minority of the total urban population.

AGE AND SEX STRUCTURE OF POPULATION

The last census reported that 40 percent of the population was under 15 years of age, 58 percent between 15 and 64, and two percent over 65 years of age. The 1961 census reported only 33.5 percent under 15, or a change of 5.9 points (6.8 for males and 4.9 for females). During the intercensal period the proportion of the population under five years of age also increased from 13.9 to 15.7 percent. As a result there was an overall younging of the population, with the mean age dropping from 24.6 to 23.0.

This change is explained by the Ethiopian Government Central Statistical Office as resulting from 'a large immigration of women during the 1960s, by a recent decline in child mortality, and by the emigration of old people' (Bondestam, 1971). However, there is reason to regard this explanation with some suspicion. First, the data regarding the influence of in-migrating women on the number of young children is incomplete. Approximately 35 percent of all in-migrants between the two censuses were women in reproductive ages (15-49), but women of reproductive years were only 27 percent of the total population — actually a minor decrease from the 27.9 percent recorded in 1961— and there is no data on whether women who in-migrated contributed proportionately higher than other women to childbearing.

Likewise, without vital statistics it is difficult to say anything about changes in child mortality rates during the 1960s. It is possible there was some improvement in living and health conditions. Nor does emigration adequately explain the changes. The yearly emigration rate is

only roughly one percent and while the emigrants come largely from older age groups there is no evidence that either the proportion of emigration or the characteristics of emigrants changed significantly between the two censuses.

The most likely explanation of the supposed growth of young people is that the 1961 figures are inaccurate. In African countries children under 15 usually account for about 43 percent of the population, with the figure for urban areas usually being a bit lower (Economic Commission for Africa, 1971: 22-23). Given the known pattern in other countries it is reasonable to speculate that the 1961 figure is the result of considerable under-reporting and mis-reporting of age. Thus, the supposed change may simply be a result of better data collection.

The sex ratio indicates a similar data problem. The 1961 ratio was 105.3, while the 1967 figure was 97.4. For a change of this magnitude to take place females would have had to have a yearly net in-migration rate of 5.3 percent, while the male rate could only have been 3.9 percent. This flies in the face of all available data. It is more probable that the 1961 figures reflect considerable under-reporting of females, par-

TABLE 3
Sex Ratio by Religion, 1961

Age	Muslim	Ethiopian Orthodox	Total
0 – 4	110	104	105
5 – 9	102	95	94
10 – 14	152	97	102
15 – 19	286	99	114
20 – 24	213	90	99
25 – 34	173	95	101
35 – 44	181	107	112
45 – 54	196	108	117
55 – 64	179	107	114
65 and over	130	92	95
Not stated	306	157	216
Total	194	105	115

ticularly in Muslim districts of the city. A direct test of this hypothesis is difficult since the 1961 district data on religious preferences was destroyed by local officials, but Table 3 indicates that citywide there was a considerable surplus of Muslim males. In 1961 10 percent of the city population was classified as Muslim, while 87 percent were Ethiopian Orthodox and 2.5 percent other.

The Central Statistical Office explanation for the far higher sex ratio of Muslim than Ethiopian Orthodox is that this is a result of the heavier in-migration of Muslim males. This is unlikely since the Muslim surplus holds not only in the ages of greatest in-migration but also in the 0-4 and 65-and-over categories. The age category 45-54, in fact, shows almost twice as many males as females — an unlikely situation, particularly given the higher male mortality rates at this age. Rather than higher Muslim male in-migration, it is more likely that Muslim females were seriously under-enumerated in 1961. An examination of the 1967 district census data by the author indicates that the districts of Teklehaymanot, Arada, Keranio, Lideta, and Gefersa, which had the highest percentage of Muslims in 1967, also had the greatest surplus of males, and it is reasonable to suspect that the same was true in 1961. It appears likely that the sex ratio was lower than that published, and attempts to explain the intercentual change from 105.3 to 97.4 are attempts to explain a difference that never occurred. The changing sex ratio can be best explained by improved enumeration of females — especially in Muslim sections of the city.

CULTURAL ASSIMILATION

Over time there has been an increasing tendency for less privileged ethnic and tribal groups to ethnically identify themselves as belonging to the dominant Amhara tribe. This can be seen in the various population estimates of the last 60 years. An estimate of the 1910 ethnic composition of the city made by Berlan lists the Amharas as 21.6 percent of the city population, while an estimate by Dr. Merab for the same

time period put the figure at 27.7 percent (Berlan: 86; and Merab, II: 113-114). Over the decades the proportion of the population identifying themselves as Amhara increased far more rapidly than the proportion tribally and ethnically Amhara. An all but forgotten administrative census done in 1952 put the Amhara figure at 52.6 percent, while the 1967 census figure indicated an increase to 77.8 percent (based on language spoken in the home).

A question of 'mother tongue' would have given more accurate readings of the ethnic composition of the city given the strong tendency among other groups to adopt Amharic. However, the question on 'language spoken in the home' does have an unanticipated advantage since language spoken in the home is an indicator of the cultural homogeneity of the city. The acceptance and use of Amhara can be seen as a measure of the at least partial acceptance of a national rather than a tribal or regional identity. Amharic, according to the census, was spoken by 77.6 percent of the city population.

The movement toward the speaking of Amharic is most noticeable among one of the largest of the lower status tribes, the Gallas. The data supports the general belief that Gallas, upon coming to the city, pick up Amharic and identify themselves as Amhara. In 1910 roughly one-third of the population were Galla, while by 1952 the figure dropped to 18.5 percent, and the 1967 census sample survey listed only 6.5 percent of the Addis Ababa population who spoke Gallinga at home. The situation is similar with the Guragies, one of the tribes formerly used for slaves by the Amhara. The number and percent of Guragies in the city is almost certainly increasing, yet the percentage of Gurgigna spoken, according to official figures, declined from 17.2 percent to 7.4 percent between 1952 and 1967.

Adoption of Amharic, however, is not universal. Recent in-migrant groups such as the Tigrai and Dorze are resisting assimilation. The Tigrena, who are currently fighting for autonomy in the province of Eritrea, view themselves as superior to the Amhara. They tend to marry exclusively within their own group, and thus the language is not lost through marriage. Tigrena-speaking people increased from 2.0 percent to 5.2 percent between 1952 and 1967. The Dorze have also increased from 0.9 to 2.2 percent; in this case primarily because they are the

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latest of the in-migrant groups and they remain relatively isolated in Dorze communities once they arrive in the city.

IN-MIGRATION TO THE CITY

In general the provinces most remote from Addis Ababa contribute the fewest migrants to the city. Remoteness from Addis Ababa as it is being used here does not simply mean distance in miles or kilometers, but rather the degree of isolation from major roads. As would be expected, the majority (61.5 percent) of the in-migrants come from Shoa province, the province in which Addis Ababa is located. As Table 4 indicates, an additional 22.6 percent of the in-migrants were born in the northern provinces of Eritrea, Tigre, Wallo, Gojam, and Begemdir. The western, southwestern, and southern provinces of Wollega, Illuababor, Kefa, Gemu Gafa, and Sidamo contributed 10.7 percent (this is almost certainly an overestimate since the method of sampling selected enumeration districts resulted in residents from Gemu Gafa province being greatly overestimated). The three southeastern and eastern provinces of Arussi Bale and Hararge account for 5.2 percent of the in-migrants. After Shoa province the greatest number of in-migrants come from Wallo (24,840), Eritrea (20,600), and Tigre (14,800); all of which are northern provinces. (Gemu Gafa has been excluded.) Fewest in-migrants came from Illuababor (1,150) in the southeast and Bale (1,330) in the south. There appears to be a clear if imprecise relationship between the level of economic development of a province and the number of its in-migrants to Addis Ababa. In-migrants are most likely to come from the more economically developed provinces. Significantly, in a nation that is 94 percent rural, the overwhelming majority of in-migrants to Addis Ababa were residents of small towns before moving to Addis Ababa. One report indicates that 95 percent of the in-migrants were born in towns (Cooper and Horvath, 1971).

Empirical data on reasons for migration is provided by a survey of 600 household heads of which 506 were in-migrants to Addis Ababa.

TABLE 4
In-migration to Addis Ababa by Province

Province	No. of in-migrants born in province	Provinces' percent of all in-migrants	Sex Ratio of in-migrants	Average age of in-migrants
Arussi	5,570	1.5	79.4	25.2
Bale	1,330	0.4	88.9	29.2
Begemder	9,830	2.7	131.1	30.1
Eritrea	20,600	5.6	113.7	25.7
Gemu Gafa	16,500*	4.5	293.5	26.7
Gojam	12,960	3.5	88.6	31.2
Hararge	12,280	3.3	89.8	26.5
Illuababor	1,150	0.3	103.4	28.0
Kefa	6,490	1.8	102.4	35.7
Shoa	225,920	61.5	93.5	31.1
Sidamo	7,440	2.0	105.2	32.2
Tigre	14,800	4.0	107.1	26.9
Wollega	7,580	2.1	137.8	33.5
Wallo	24,840	6.8	94.1	28.9
Total	367,290	100.0	116.3	29.4

**A gross over-estimate due to peculiarities of the sampling design.*

Age of the in-migrants could be determined in 383 cases, with 60 per cent of the sample falling between 15-31 years at the time of arrival. Of the in-migrants, 305 had come from the province of Shoa in which Addis Ababa is located, while the remainder were spread among the provinces with no clear pattern. Only 14 (2.3 percent) of the total sample of 600 wished to leave Addis Ababa. Employment was the reason given for migration by 57 percent of the 506 household heads who had moved to the city. Of this group 283 had come seeking job opportunities; there were only eight cases of job transfers, military moves, or servants following their masters.

Family and friendship ties was second in importance, being listed as the principle cause of moving by 81 household heads (17 percent). Very few migrants enter the city without contacts. Only four of the

household heads in the total sample had no relatives in the city. The desire for educational opportunities was the third most important cause for in-migration, being listed by 59 (11.7 percent) of the household heads. The greatest interest was in vocational training.

EMPLOYMENT

Among the most serious problems facing the new Ethiopian government is that of employment. Newcomers come not because of the abundance of city jobs, but because of the poverty and educational limits of the countryside. As Table 5 indicates, over half the work age population is unemployed. Newcomers to the city are particularly handicapped since the overwhelming majority of in-migrants to the city are laborers with minimal skill levels. Once in town, switches are often made from traditional occupations, such as house builder or mat maker, to higher paying jobs such as gas station attendant or house zabania (guard). These latter jobs pay roughly \$.45 per day. Most working females have jobs relating to commerce. Selling of food, operating tej bets (bars), and some knitting, spinning, and dressmaking are common, as is prostitution.

TABLE 5
Economically non-Active Population Aged 10 years and
Above (Ethiopians only) 1967

	Number	Percent of Total Population over 10 years
Males	61,100	29.5
Females	166,000	76.5
Total	227,100	53.0

Source: Lars Bondestam, "A Draft Report on Urbanization in Addis Ababa: Central Statistical Office" mimeograph, September 1971, p. 21.

EDUCATION

Addis Ababa is the natural center of all those who wish to continue their education beyond primary school. Roughly 30 percent of the migrants to the city are aged 10-19. The city, according to Ministry of Education figures, has 38 percent of all secondary school students in

TABLE 6
Enrolment in Government Schools in Addis Ababa
1961 and 1967

	1961-62	1967-68	% Yearly Average Growth
Primary school enrolment	24,400	39,100	8.2
Population aged 7-12 (school age)	53,900	97,100	10.3
Percentage of primary school age population enrolled	45.3%	40.3%	—
Secondary school enrolment	6,300	16,400	17.3
Population aged 13-18 (Secondary school age)	51,900	85,800	8.7
Percentage of secondary school age population enrolled	12.1%	19.1%	—
Total government school enrolment	30,700	55,500	10.4
Population aged 7-18	105,800	182,900	9.6
Percentage of school age population enrolled	29.0%	30.35	13.5
All school enrolment (government, mission, private and Ethiopian church)	41,800	89,200	13.5
Percentage of school age population enrolled	39.5%	48.8%	—

Source: Education data from Ministry of Education and Fine Arts Bureau of Education Research and Statistics, 1967-68, and Ethiopia Statistical Abstract 1970 and Bondstam op. cit.

the country. The capital also contains the nation's sole university, Haile Selassie I University, which was closed in 1974 by the military government.

The most recent census sample survey indicates that 36 percent of the males in the city have had no schooling, while an additional 33 percent have attended the traditional priests schools where literacy is not encouraged. There is little difference between migrants and the total city's population, which is not surprising given that a majority of the city residents were themselves migrants. Seventy-seven percent of the female household heads have received no schooling and none were enumerated as having gone beyond the primary grades. On the other hand, knowledge of languages is very high. In 44 percent of the households two languages are known and in 12 percent three or more are known. Galligna and English are the best known second and third languages.

Census figures indicate that while school enrolments are growing, population is growing as fast or faster. Primary school enrolment in government schools increased 8.2 percent between the two censuses, while the school age population, 7-12 years old, increased 10.3 percent. The unfortunate result was that the percentage of the primary school age population attending school decreased from 45.3 percent to 40.3 percent. Outside Addis Ababa the situation is even less satisfactory, with only 5.5 percent of the school age population in primary schools.

On the secondary school level enrolments have outpaced population growth, with the result that 19.1 percent of the group aged 13-19 is in secondary school as compared to 12.1 percent in 1961. Outside of Addis Ababa only 1.5 percent of the population of secondary school age ever attends school. This is one of the very lowest school attendance rates in the world. There are no secondary schools for the 94 percent of the population living outside towns. To date the military government has not moved to change the feudal pattern. College students have been sent to the countryside, but the reason for their dispersal had far more to do with destroying the students' influence on government policy than with improving rural education.

As Table 7 indicates, the chance of a person ever attending school is greatly influenced by age and sex. Among those over 45 well over half the males and 19 out of 20 females are illiterate. The situation is some-

TABLE 7
Percent Illiterate by Age and Sex, 1967

Age	Male	Female	Total
10 – 14	21.7	31.4	26.5
15 – 19	32.6	53.4	43.0
20 – 24	36.4	78.2	57.3
25 – 29	40.2	84.5	62.3
30 – 34	38.6	89.8	64.2
35 – 39	40.0	91.3	65.6
40 – 44	46.0	93.8	69.9
45 – 49	49.0	92.2	70.6
50 – 54	56.3	96.2	76.3
55 – 59	57.3	94.7	76.0
60 – 64	64.2	96.7	80.5
65+	69.7	97.3	83.5
Total	39.5	74.2	56.9

what better among the young where only a fifth of the males and about a third of the females, age 10-14, in the city are illiterate. Only when one looks at the population under 20 is half the population literate. The overall city literacy rate for those 10 and over was 42.8 percent in 1967 and is estimated by the author to be 47 percent as of 1975.

The extremely high level of female illiteracy reflects the traditional opposition to female schooling. While female illiteracy is still 50 percent higher than male illiteracy, the amount of female illiteracy has been declining appreciably among the younger age groups, but the older pattern is evident among women over 30 where 9 out of 10 are illiterate. If present trends continue, within the decade female and male literacy rates for the young will be virtually identical within the city. However, as of 1975 roughly half of the city population is still illiterate, and the 94 percent of the national population that is still rural is almost totally illiterate.

SUMMARY

This paper on the spatial structure and population of Addis Ababa contains some of the first quantitative data on the city. The ecological

structure of Addis Ababa bears little similarity to cities of the industrialized nations. The colonial legacy in other African cities where there are high density-low status and low density-high status quarters of the city is also inappropriate. Addis Ababa's ecological structure most closely approximates the ideal type of preindustrial city. Commercial and residential properties are intermixed. Although there is some variation by social class level among districts there is no clear idea of residence for the elite — or for the very poorest beggars.

Demographically, the city possesses one of the consistently highest city growth rates in the world — seven percent a year. Migration from small towns continues to be the principal cause of growth. Over three-quarters of the adult city population was born elsewhere in Ethiopia. Employment opportunities in the city are limited, with less than half the population over 10 years of age employed. Peasants migrate to the city because bad as things are there, they are worse in the countryside, and at least in the city there is some hope of betterment. Virtually all in-migrants already have relatives in the city who can aid their period of adjustment. Those desiring education for themselves or their children must move to the city. City school enrolments have not kept up with population growth, with the result that only 4 out of 10 school age children attend any primary school. On the other hand, in the rest of the country only five percent of the population ever goes to primary school, and only 1.5 percent attends secondary schools. The nation's sole university — although now closed — is also in the capital.

The future prospects for Addis Ababa are decidedly guarded. Unrest and periodic famine in the countryside continue to swell the city population, while the military government's nationalization of financial, manufacturing, and commercial firms has resulted in a constriction of the available jobs. Trained managerial and business personnel were heavily non-Amharic, particularly Italian, Armenian, and Eritrean, and under the current situation of political unrest cannot be easily replaced.

On the other hand, Addis Ababa, as a preindustrial city, is more immune to major disruptions of everyday life due to industrial paralysis. A scarcity of gasoline due to the sole refinery being located in the independence-seeking province of Eritrea has only limited impact on a nation of 26 million people but less than 50,000 trucks and automobiles. The older Ethiopian tradition of not viewing the city as a place of fixed settlement, but rather as a place one migrates to when

economic and weather conditions are favorable, and out of when they are not, may very well reassert itself. The military socialist government does not yet have any urban policy as such – but then neither did the emperor's deposed government. Fortunately, Ethiopian peasants, both urban and rural, have centuries of experience of fending for themselves.

NOTE

¹ Data problems are particularly severe in the nation of Ethiopia since a national census has never been taken. As a result much of the available information is heavily based upon hypothesis and conjecture. Descriptive data that is commonly published for other nations is, for Ethiopia, either unknown or withheld by the Ethiopian government. All figures for the period prior to 1960 are basically educated guesses. According to the United Nations Statistical Office, Ethiopia is included along with Afganistan, Somalia, Saudi Arabia, and several small African and Asian countries in the three percent of the world's countries where no tangible measure of birth registration can be made (United Nations, 1971: 17). A few studies have been done of Addis Ababa emphasizing the historical, geographical, or planning aspects of the city (Berlan, 1963; Horvath, 1966; and, deMorien, 1966).

Among sources for this report are the 1967 Housing Census and Sample Population Survey, and the 1961 Census of Households. The former census is the most accurate information available on the city. However, even more recent data has serious problems and it is, as a general rule, safer when there is a conflict to give greater weight to the estimates of knowledgeable researchers than to the actual census data. The 1967 census sample survey was taken in 90 of the 900 enumeration districts and an attempt was made in the sampled districts to enumerate every 10th housing unit. Of the 90 sample enumeration districts all data for one district was lost by those responsible for the census so the data is based upon 89 enumeration districts. As of this date some of the census data in this paper has yet to be officially released and it is unlikely that items thought to be politically sensitive will every be published.

The 1961 census was a pioneer effort and clearly resulted in considerable under-enumeration. In spite of this, the Imperial Ethiopian Central Statistical Office only adjusted the figures upward by 1½ percent to 455,470, while the more reliable 1967 census was adjusted upward by a more sensible, but still insufficient, 6 percent to 683,530. Table 1 gives a rough indication of the difficulty of taking recorded figures at face value. These particular adjustments of

vital statistics are conservative and probably understate the actual situation. Estimates made by the office of the Medical Officer of Health of the municipality are similar. They place the 1972 birth rate at 42.3; the death rate at 16.2; and the infant mortality rate at 175.

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CONDITIONS OF MIGRATION, ACCESS TO INFORMATION AND FIRST JOBS: A Study of Migrant Adaptation in Sao Paulo, Brazil

Daniel J Hogan and Manoel T Berlinck

Sao Paulo, with a 1970 population of six million, is the capital of Brazil's expanding industrial system. It has experienced rapid growth throughout the century, spurred first by the growth of coffee in the late 19th century (Morse, 1958). Industrialization drives, first of an import-substitution character, and by the 1950's and 1960's heavily capital-intensive, increased the city's importance, and the regional inequalities already existent in the country. The internal migration responsible for this growth has increased continuously in volume, and decreased in 'quality' as larger proportions of the migrants have come from the impoverished Northeast (Hogan, 1974).

Table 1 presents the dimensions of Sao Paulo's growth in the last century. The annual growth rate has always been high, and always higher than the growth rate of Sao Paulo state, even in the boom years for coffee, when it was work on the 'fazendas' which attracted so many migrants to the region. While the population continues to increase dramatically in volume, the 1970 census indicates that the annual growth rate may have peaked in the 1960's.

Migration has clearly been a continuous source of Sao Paulo's fantastic growth rate. Camargo (1968:110) has shown that 63.6 percent of the growth of Sao Paulo 'município' from 1900-1960 was due to migration. As Table 2 shows, even the decline in the 1950's of the

TABLE 1
Growth of the Population of the City of Sao Paulo
1872-1970

Year	Population	Percent Change	Annual Growth Rate, %
1872	31,385	—	—
1886	47,697	52	3.0
1890	64,934	36	8.0
1900	239,820	168	14.0
1920	579,033	141	4.5
1934	1,060,120	83	4.5
1940	1,337,644	26	4.0
1950	2,198,096	65	5.0
1960	3,825,351	74	5.5
1970	5,978,977	56	4.5

Source: Araujo Filho (1958) and 1970 census.

TABLE 2
Migration to Sao Paulo, 1900-1960

Inter-censal Period	No. of Migrants	Percent of <i>Município</i> Growth Attributable to Migration
1900-1920	218,451	64.4
1921-1940	496,543	66.5
1941-1950	619,755	70.5
1951-1960	950,093	58.4

Source: Camargo (1968: 110).

relative importance of migration was accompanied by a large increase in the absolute number.

It has been dramatic figures like these, and even casual acquaintance with the vivid contrast observable in any Latin American city, which led social scientists to study adaptation of migrants. (Germani, 1961; Lopes, 1961; Cornelius, 1971; Browning and Feindt, 1971, among others.) The basic question has been: how have rural peasants made their way in the modern industrial city?

The research from which this paper derives is in the tradition of

these studies. We have taken a broader view of the problem, however, in considering adaptations of urban natives as equally problematic. In the case of Sao Paulo, we have shown elsewhere (Berlinck and Hogan, 1974; Hogan and Berlinck, 1973) that rapidly changing structural features of urban social organization outweigh individual characteristics in their effect on adaptation. Thus, even native 'Paulistanos' are having an increasingly difficult time in the urban labour market. Equally prepared migrants receive poorer first jobs today than in the 1940's and 1950's, when the industrialization taking place absorbed more labour and the volume of migration was lower. Furthermore, both natives and migrants are constrained by a rigid class system, which requires maintaining dependent relationships with upper classes in order to secure access to information crucial to their adaptation to urban life (Hogan and Berlinck, 1974).

The emphasis in this paper on migrants, and individual migrant characteristics, therefore, does not imply an evaluation by us that these are the most important features or that this is a complete analysis of factors concerning adaptation in the city of Sao Paulo. In this paper, we will be concerned with migrant background in terms of information processing. How differentiated was he as an information processor? How complicated were the information networks in which he lived and worked? We want to know how the way an individual lived and the conditions of his migration to Sao Paulo have structured his access to information. The hypothesis is that the greater his access to information before migration, the better will be his first job in the city.

The first job is an important life experience. This initial placement in the urban job market positions the individual for whatever moves he may make in the future. It determines his initial adaptation to the city, and such adaptations, once established, change only with much difficulty. Almost 55 percent of our sample were still at the same job level at the time of the interview as at their first job; another 30 percent had moved only one scale-step away.

The more different experiences he has, the more differentiated will be the individual's stock of symbols. Each new situation calls for a unique arrangement of the individual with the environment. This new adaptation will combine the respondent's characteristics with the par-

ticular features (some familiar, some new) of the new environment. The particular features selected are crucial, and will be examined for the end-point — Sao Paulo. The more moves he has made, or jobs he has held, etc., the more versatile and capable of response to different situations he will be. Data is not available on which to distinguish 'drifters' from those whose moves have been made for the sake of obtaining better conditions. It is assumed that the former are a minority, however, and will weaken but not reverse the predicted relationship. It is probably more than just an additive process at work, i.e. it is not only the continuous increments to the stock of symbols which makes for a differentiated receiver or processor but, as Simmons (1970) has argued, there is also a psychological disposition developed, an ability to be creative in the face of new situations, in Simmons' terms, to be 'mentally flexible'.

At any given time an individual possesses a symbolic vocabulary of responses. He is aware of more sources of information if he has once been linked to them, and can therefore seek them out in a new setting. The more often he has moved, the more often he has had to reorganize his symbolic world, responding to a new set of resources. On the other hand, the longer he has lived in the more complex (larger) places, the more opportunity he has had to become enmeshed in more elaborate communication networks. It is hoped that the larger research project of which this paper is a part will be able to resolve the relative importance of these factors. For the present, the contrast will be drawn between those who have lived in places other than where they were born and Sao Paulo, and those who migrated directly to the city.

The items indexing access to information are:

- a. Did the respondent know anyone in Sao Paulo before migrating there? That is, did he have a direct communication link with the city, involving him even before migration in exchanging information about the urban environment and its resources?
- b. Had the respondent ever visited Sao Paulo before migration? Had he by his personal knowledge and first-hand experience, established some connection with the urban system?
- c. Had the respondent arranged a place to stay on his first night in Sao Paulo? Was his access to information so low that he did not even know where he would spend the night on arrival in the city?

-
- d. Had the respondent arranged a job before migrating? This would have required an even greater amount of information, involvement in a channel of communication which was more regular and intense.
 - e. Was the respondent literate? Literacy means a greater potential access to information. An inability to obtain information from various kinds of written material isolates an individual from important sources of information.
 - f. Did the respondent move directly from his place of birth to Sao Paulo? This indicates whether the migrant has already had the experience of entering a new system, with a different set of resources, and of being required to establish new lines of communication. This is a major way for migrants to the metropolis of Sao Paulo to become more differentiated receivers and processors of information prior to coming to the city.
 - g. Was the respondent born in a rural area? Rural areas are, in general, more isolated from the other parts of the larger system of which they are a part, and therefore individuals in a rural area have fewer sources of information with which to establish a link. They are, then, on the average more likely to be involved in fewer channels of communication.
 - h. Did the respondent come to Sao Paulo directly from a rural, agricultural job? An agricultural job indicates that the respondent is still living in a rural area, isolated from communication networks. Even if an individual is born in a rural area, he may expand his participation in complex information networks by working in a non-agricultural job, either in a nearby town, or at some other place to which he has migrated before Sao Paulo.

Some of these items measure the presence or absence of links, some the potential for establishing links, and some the consequences of more or less access to information. Overall, they indicate the access to information which the migrant had before migration. These dichotomized items are intercorrelated highly, as Table 3 shows. Only items a and c (whether the migrant knew anyone and had arranged a job) are not

TABLE 3
Matrix of Yule's Q, for Selected Migration Preconditions

	a	b	c	d	e	f	g	h
a	1.00	.43	.88	.43	.39	.15	.30	.17
b	.43	1.00	.54	.74	.72	.69	.62	.51
c	.88	.54	1.00	.64	.49	.15	.46	.28
d	.43	.74	.64	1.00	.78	.65	.64	.65
e	.39	.72	.49	.78	1.00	.52	.80	.79
f	.15	.69	.15	.65	.52	1.00	.37	.57
g	.30	.62	.45	.64	.80	.37	1.00	.80
h	.16	.51	.28	.65	.79	.57	.80	1.00

correlated highly with all items. They are, though, highly correlated with each other.

In a variety of ways, an individual's life experience has involved him in more or less complicated networks of communication, and contributed to his capacity to process information. The broad parameters which structure the possibilities for an individual — social class, education, the kind of communities in which he has lived — leave a range of individual differences unconsidered. It is the intention of this paper to show some of the important dimensions of variation within social classes. It helps detail how social class operates in determining individual life chances. That is, a class differential access to sources of information is part of its advantage in securing the resources it seeks.

Table 4 presents the mean scores of the first jobs migrants obtained in Sao Paulo, by various migration preconditions.¹ For each indicator, the difference is sizable. Those migrants who come more prepared, who come with a wider range of experience, a greater number of links to potential sources of information about the city, have obtained considerably better jobs on arrival in Sao Paulo. Since this initial job placement determines to a great extent the future job possibilities for an individual, and since occupational level is strongly determinant of the ways in which an individual adapts to the urban social system (Hogan and Berlinck, 1974), this finding is central to the concerns of this research. The consequences of some of these indicators are more obvious

TABLE 4
Mean Scores of First Job in Sao Paulo After Age 20,
by Various Migration Preconditions*

Migration Preconditions	No	(N)	Yes	(N)
A. Did R know anyone in Sao Paulo before migration?	6.0	(120)	5.6**	(373)
B. Had R ever visited Sao Paulo before migration?	6.5	(248)	4.8	(242)
C. Had R arranged a place to sleep on first night?	6.3	(127)	5.5	(366)
D. Did R have a job ready before migration?	6.1	(372)	4.5	(123)
E. Was R literate?	6.9	(172)	5.2	(546)
F. Did R make any intermediate stop in migration to Sao Paulo?	5.9	(391)	5.3	(328)
G. Was R born in non-rural area?	6.5	(296)	5.0	(430)
H. Did R have non-agricultural job before migration?	6.7	(227)	5.2	(315)

* 'High' scores indicate low occupational status, and vice versa; i.e. a score of 1 is the highest status, while a score of 7 is the lowest.

**Those in-migrants who knew both friends and relatives had a mean of 5.2.

than others. The illiterate rural-born migrant whose last job before coming to the city was agricultural is probably the stereotype of the unprepared, isolated migrant for whom the city is a nightmare of complex structure, to which he has very little access, and so enters the system at the very bottom. There are, however, degrees of isolation, and the other indicators (some of which make as much difference as these) also suggest ways that some individuals have established links to the urban system; such links clearly put him at an advantage in the competition for jobs.

As Table 5 shows, such links are in part an aspect of social class. The higher on the occupational scale an individual was before migration, the more likely he was to be 'positive' on each of these indicators.

TABLE 5
Selected Aspects of Migrant Background and Migration Experience, by Last Occupation Before Migration

Migration Preconditions	Last Occupation Before Migration (in percentages)						
	Adminis- trators	Liberal Professions	White Collar	Routine Non-manual	Foremen	Skilled Manual	Unskilled Manual
% who knew someone in Sao Paulo before migration	100.0	76.0	97.0	77.0	64.3	82.1	69.5
% who had visited Sao Paulo before migration	100.0	100.0	90.9	75.0	50.0	50.9	31.1
% who had arranged a place to sleep first night	100.0	84.0	87.9	90.2	71.4	85.7	63.5
% who had arranged job before migration	100.0	72.0	48.5	45.9	35.7	26.8	11.2
% literate	100.0	100.0	97.5	98.6	75.0	86.4	53.7
% migrating in stages	—	—	—	—	—	—	—
% not born in rural area	100.0	92.6	82.5	82.9	50.0	63.6	31.4
% whose last job before migration was non- agricultural	100.0	96.3	97.5	98.6	50.0	95.5	33.5
(n) Rows 1—4	(2)	(25)	(33)	(60)	(14)	(53)	(267)
(n) Rows 5—8	(4)	(27)	(40)	(70)	(16)	(66)	(324)

Note: The (n) is the base on which the percentages were calculated. The base is larger for the last four rows because these questions were asked of all migrants regardless of age at migration, while the first four were asked only of those migrating as adults.

Nevertheless, when occupation is controlled, these indicators still suggest that the more prepared migrants obtain better jobs. In Table 6, mean scores of first jobs in Sao Paulo are presented by each of the 'preparedness' indicators, within the three largest occupational categories for last job before migration. These categories, routine non-manual workers (4), skilled (6) and unskilled (7) workers, were the only ones with sufficient cases to examine in such detail. Among the lower white-collar workers, being positive on the various items generally means a whole scale step higher in the first job, than being negative. Among skilled workers, the difference is smaller, but clear. To be sure, there is one instance (the only one in the table), in which the difference is in the contrary direction (the upper right-hand corner), and this is only a difference of .1. Nevertheless, in three of eight items, there is no difference, and in the other items the difference is smaller than in either of the other occupational categories.

This finding, that the indicators of access to information are more important in predicting occupational success of middle-class migrants, and practically negligible for unskilled manual workers, was unanticipated but not surprising. The importance of these indicators is apparently directly related to social class, though with only three categories it is difficult to be conclusive. The over-whelming importance of class in limiting possibilities for employment means that those at the bottom are going to remain there. There is only marginal advantage in greater access to information about the system for individuals at the bottom. Since they are the majority of migrants, this is further support for the argument that individual characteristics cannot account for 'success' in the urban environment. Even relative to his own position in the occupational hierarchy, an individual from the lowest category, who comes as prepared for city life as a middle-class person, cannot therefore be more successful in the urban job market.

ACCESS TO INFORMATION, TIME OF ARRIVAL, AND FIRST JOB IN SAO PAULO

It is necessary to demonstrate that changes over time observed in mean scores of first job in the city after migration are not due to changes in

TABLE 6
Mean Score of First Job in Sao Paulo by Last Occupation Before Migration, and
Selected Migration Preconditions*

Last Occupation Migration Preconditions	Last Occupation											
	Routine Non-manual				Skilled Manual		Unskilled Manual					
	No		Yes		No		Yes		No		Yes	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
a. Did R know anyone in Sao Paulo before migration?	4.7	(14)	4.4	(47)	6.1	(10)	6.0	(46)	6.7	(81)	6.8	(183)
b. Had R ever visited Sao Paulo before migration?	5.0	(15)	4.3	(45)	6.2	(26)	5.9	(27)	6.8	(184)	6.6	(81)
c. Had R arranged a place to sleep on first night?	5.5	(6)	4.4	(55)	6.3	(8)	6.0	(48)	6.8	(97)	6.7	(167)
d. Did R have a job ready before migration?	4.9	(33)	4.0	(28)	6.1	(41)	5.8	(15)	6.7	(236)	6.7	(30)
e. Was R literate?	4.4	(69)	—		6.6	(9)	6.0	(57)	6.9	(148)	6.5	(173)
f. Did R make any intermediate stop in migration to Sao Paulo?	4.8	(21)	4.2	(49)	6.2	(20)	6.0	(46)	6.7	(192)	6.7	(130)
g. Was R born in non-rural area?	4.8	(12)	4.3	(58)	6.4	(24)	5.9	(42)	6.8	(222)	6.4	(101)
h. Did R have a non-agricultural job before migration?	—		—		—		6.1	(63)	6.7	(215)	6.7	(108)

Note: Dashes (—) mean that means were not computed for these cells, which had n's of less than 5.

*'High' scores indicate low occupational status, and vice versa; i.e. a score of 1 is the highest status, while a score of 7 is the lowest.

the degree to which migrants were more or less prepared. Table 7 permits us to do this. The upper set of figures are the means for those answering positively for migration characteristics a to h (these questions are as lettered in Table 6), and the lower set are for those who answered negatively.

The first thing to point out is that migrant experience, as measured by this set of items, affects occupational placement consistently throughout the time-span under consideration. The degree to which the migrant has developed various routes of access to sources of information and the more diverse his range of experience, the higher he places in the urban occupational structure. Only at one time period (1945-49) and for a single characteristic (whether the respondent knew anyone in Sao Paulo before migrating) do 'positively selected' migrants score lower than 'negatively selected' migrants. It should be noted that this period was a 'golden era' for unqualified migrants. It is this period, a time of rapid industrialization, which shows the highest rates of upward mobility for migrants and natives with poor qualifications.

Those responding negatively to the migration pre-conditions have been entering the urban labour force at consistently lower positions since the late 1940's, when a peak in mean scores occurred. The exceptions, as can be observed, are small. For positively selected migrants, the pattern is similar, but not identical. The clearest difference is in the late 1940's, when a decline in occupational status is evident for all indicators. This period of industrial expansion increased job opportunities primarily in manual occupations, with the result that new entrants into the labour force, from above and from below, were overwhelmingly placed in these categories. There seems to be some improvement in the 1955-64 period (unlike the pattern for negative characteristics), a time when Brazilian industrialization was heavily capital intensive, and the jobs opened up were less likely to be available to the more unprepared migrants. The most apparent trend of all is for the most recent period. For the negative characteristics from 1960, and for the positive from 1965, the decline in mean first job is precipitous and nearly uniform (Of the three exceptions, only one is greater than .1).

SUMMARY

Access to sources of information before migration is positively related to status of first job in Sao Paulo. The more the migrant is plugged in

TABLE 7
Mean Score of First Job in Sao Paulo for Migrants Arriving
After Age 20, by Various Migration Preconditions and
Time of Arrival*

	1935-39	1940-44	1945-49	1950-54	1955-59	1960-64	1965-70
<i>Positive Characteristics</i>							
a.	4.5 (10)	5.3 (16)	5.4 (19)	5.4 (30)	5.4 (35)	5.4 (72)	6.0 (111)
b.	4.0 (8)	4.5 (13)	5.1 (15)	4.7 (22)	4.8 (28)	4.7 (54)	5.4 (71)
c.	4.5 (10)	4.9 (15)	5.3 (20)	5.3 (31)	5.2 (37)	5.3 (72)	6.0 (108)
d.	4.4 (5)	3.6 (7)	4.1 (7)	4.6 (12)	4.2 (18)	3.8 (24)	4.5 (30)
e.	4.7 (14)	5.1 (19)	5.0 (32)	4.9 (37)	5.0 (41)	5.0 (72)	5.5 (92)
f.	4.5 (11)	5.1 (14)	4.8 (20)	5.0 (30)	4.9 (34)	5.1 (72)	5.7 (95)
g.	4.3 (10)	4.6 (14)	4.7 (22)	4.9 (31)	4.7 (31)	4.6 (56)	5.1 (65)
h.	4.9 (14)	4.5 (13)	4.8 (22)	4.8 (32)	4.8 (34)	5.2 (65)	5.4 (83)
<i>Negative Characteristics</i>							
a.	—	—	5.0 (5)	5.7 (9)	5.8 (13)	6.1 (23)	6.3 (33)
b.	6.4 (5)	6.4 (7)	5.8 (8)	6.6 (18)	6.5 (19)	6.8 (41)	6.7 (72)
c.	—	—	—	6.1 (10)	6.4 (11)	6.7 (23)	6.3 (35)
d.	5.3 (9)	6.0 (13)	5.8 (17)	5.9 (29)	6.3 (30)	6.2 (71)	6.5 (114)
e.	—	—	—	6.8 (11)	6.9 (11)	7.0 (29)	6.9 (59)
f.	6.2 (6)	5.8 (10)	5.8 (16)	6.0 (16)	6.4 (18)	6.6 (29)	6.6 (55)
g.	6.3 (7)	6.6 (10)	6.2 (15)	6.1 (17)	6.4 (21)	6.7 (45)	6.7 (86)
h.	—	6.9 (10)	6.4 (12)	6.6 (14)	6.6 (18)	6.7 (31)	6.9 (68)

*'High' scores indicate low occupational status, and vice versa; i.e. a score of 1 is the highest status, while a score of 7 is the lowest.

to various sources of information about the city before coming, the more able he is to secure a higher status job on arrival. This is true when controlling time of arrival and occupational background.

A major qualification of this relationship is required by the finding that the importance of information declines with social class. For those at the bottom of the social hierarchy, only the distinction between rural-urban birth and literacy-illiteracy – major indicators of isolation from channels of communication – makes a difference for the first job. Even then the difference is small. It is not merely access to sources of information which matters; the type of source is also important. Specifically, links to higher classes are more valuable than links to lower classes. Lower class migrants may have as many routes of information available, but if these routes are to other lower class persons, then less information will be exchanged. Since upper classes have more information, it follows that access to upper class sources of information will be more rewarding.

NOTE

¹ The occupational scale used here is that developed by Hutchinson (1960) and modified by Gouveia (1966). The categories are ranked from 1 (high) to 7 (low). They are (1) high political and administrative positions; owners of large businesses; (2) liberal professions, managers, owners of middle-sized businesses; (3) lower managerial or supervisory positions, owners of small businesses; (4) routine, non-manual work; (5) foremen; (6) skilled labourers; (7) unskilled labourers.

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FERTILITY: Natives and Migrants in Metropolitan Latin America

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One of the regions of the world experiencing the most rapid urbanization is Latin America. This rapid expansion has been accompanied by a rise in the number of cities of all sizes, as well as in the proportion of people living in urban areas. While it is true that urbanization is the major demographic characteristic of Latin American countries today, the high fertility rates in the rural areas have served to increase, in addition, the absolute population in the rural areas. One important question which can be raised is whether or not the urbanization process will eventually lead to a decline in the birth rate of the region, assuming that urban dwellers manifest a lower level of fertility than the rural population.

If one assumes that one of the major components¹ of urbanization is internal migration, then it would be expected that recent migrants from rural areas or from smaller urban areas would show different patterns of fertility from the non-migrant population in the cities. If migrants begin to absorb the fertility value system existing in the metropolitan areas of destination, it is possible to speculate that eventually

The authors would like to emphasize that the views expressed in this paper are their own, and not necessarily those of any agencies with which they are associated.

the overall birth rate for the region will decline as has happened in other areas of the world. The question of the relationship of migration and place of origin to fertility has been an important one in recent demographic literature (see Zarate and Zarate, 1975), although the relationship is not at all clear at the present time. It is the purpose of this paper to address ourselves to some of the issues surrounding this relationship.

The present paper is a continuation and extension of the study of Latin American metropolitan fertility patterns presented in an earlier study of Brazil.² The objectives of this paper are two-fold: (1) to ascertain whether the pattern found in the earlier analysis is also present for other metropolitan areas of Latin America; namely, that natives of large cities exhibit lower levels of fertility than migrants, both urban and rural, and (2) to include in a single model an analysis of socio-economic and demographic variables, a procedure not undertaken in the previous study. Little attempt will be made to explain individual cases, for example, why Mexico has a higher level of fertility than Rio de Janeiro. Rather, the intent of this investigation is comparative and focuses its interest primarily on discovering whether similar patterns are encountered in the cities examined, regardless of specific parity in particular cities. In addition, an attempt is made to place various socio-economic variables in an order in terms of their relative contribution to the level of fertility.

METHODS

Data for the study came from the seven-city Latin American fertility study carried out by the Latin American Center for Demography (CELADE).³ The seven cities and their respective sample sizes were Buenos Aires, 2,136; Rio de Janeiro, 2,512; Bogotá, 2,259; San José, 2,132; Mexico City, 2,353; Panama City, 2,222; and Caracas, 2,087. We selected only ever-married women in the samples, including both legal and common law marriage in this definition.

The major purpose of this study is to look at the relationship between fertility and migrant status and selected socio-economic variables. These variables include wife's education, husband's occupation, wife's father's occupation, age at arrival in the city (if a migrant), and social mobility. Fertility is defined simply as the number of live births to the respondent.

Migratory status is measured in terms of place of birth as compared to present residence in the city. Initially, there were four categories of migratory status: (1) foreign-born, (2) urban natives, (3) urban migrants, and (4) rural migrants. The foreign-born were excluded early in the analysis because we lacked enough information on their urban/rural origins or national backgrounds to include them within the framework of the present study. Overall, their fertility level was lower than that of any other migration status group.

Occupations of husbands (at time of the survey) and fathers (at the time of the respondent's marriage) were originally categorized into six levels, according to Hutchinson's (1960) modification of Moser and Hall's classification (1954).⁴ These six levels are collapsed into three for the present analysis: upper stratum, including professionals, high administrative officials, managers and executives; middle, or inspectional, supervisory and other non-manual workers; and lower, including all levels of manual workers. In measuring social mobility, we use the original six-level status grouping and compare the level of the father's occupation with that of the husband's. Mobility, then, is a measure of the wife's marital mobility, not of the husband's achievement.

Educational attainment is a three-category variable, the lowest being zero-to-three years of formal education; the second, four years to completion of primary education; the last being some secondary school or above. The choice of categories for both occupational status and education level was based on previous reports that important differences in fertility exist between manual and non-manual status groups, and between those with and without some primary education. (See, for example, Zarate and Zarate, 1975.)

Throughout the analysis we are comparing mean fertility between various groups. The principle statistical method used is the analysis of variance, both one-way and multiway. Our first procedure is to present

descriptive information on fertility patterns of women in the seven Latin American cities, looking at effects of the variables mentioned above one at a time. At the same time, we present results of one-way analyses of variance for inferential purposes, testing for equality of mean fertility among the various levels of the independent variables.

After the initial one-way analyses are made, we include four of the most important independent variables in a four-way analysis of variance, using the technique sometimes known as multiple classification analysis (MCA).⁵ This technique is equivalent to a multiple regression using dummy variables for all levels of the independent variables. One weakness of this method is that we lose the information on the ordering of such variables as education and occupational status, since the procedure treats all levels of the independent variables as qualitative categories. Thus, it only tells us if means within categories are different, making no assumptions about directionality. The model also assumes no interaction between the various independent variables. In other words, it is an additive model. The assumption of no interaction was tested by including all two-way interaction terms in the models, testing the null hypothesis that the interactions were zero. The null hypothesis of no significant interactions was not rejected in any sample at the .05 level.

The advantage of the four-way analysis of variance is that we can include several variables simultaneously in the model, looking at partial effects of the various independent variables. By this method, we can arrive at estimates of the relative importance of the predictors of fertility in the model.⁶

RESULTS

We first compared the mean fertility for each migrant status group in each sample, separately for those married 14 years or less, 15 years or more, and for the total sample. Since the duration of marriage is among the most significant in affecting mean fertility, we felt it wise to look at the two groups separately. The longer-married group is more likely to

have completed its fertility and has had longer exposure to other factors which influence number of births. Therefore, one expects that they would be a more rewarding group to study in terms of the amount we can learn about factors which affect fertility.

The results of the first level of analysis are presented in Table 1. Overall, there seem to be three types of populations, in terms of fer-

TABLE 1
Mean Parity for Ever-Married Women in Seven Latin American Cities, by Migratory Status and Duration of Marriage

	Urban Natives	Urban Migrants	Rural Migrants	F-Ratio
<i>Married 14 Years or Less</i>				
Buenos Aires	1.423	1.390	1.431	0.070
Rio de Janeiro	2.098	2.199	3.195	9.666***
Bogota	2.774	2.839	3.022	1.867
San Jose	2.895	2.704	2.815	0.673
Mexico City	2.911	3.240	3.099	2.655
Panama	2.538	2.430	2.705	1.820
Caracas	2.525	2.699	3.208	8.119***
<i>Married 15 Years or More</i>				
Buenos Aires	2.265	2.338	2.538	1.237
Rio de Janeiro	3.209	3.950	5.905	14.200***
Bogota	5.295	5.380	5.593	0.629
San Jose	5.123	5.077	5.693	2.201
Mexico City	5.146	5.134	6.113	7.973***
Panama	3.898	4.013	4.876	12.150***
Caracas	5.374	5.180	5.649	1.118
<i>Total Sample</i>				
Buenos Aires	1.760	1.821	1.924	1.405
Rio de Janeiro	2.571	2.946	4.113	16.787***
Bogota	3.708	3.855	3.987	1.669
San Jose	3.788	3.754	3.993	0.947
Mexico City	3.755	4.163	4.493	11.386***
Panama	3.100	3.082	3.649	11.967***
Caracas	3.538	3.715	4.400	10.870***

***p > .001

tility level: Buenos Aires has rather low fertility; Rio seems to be in transition; and the others show quite high fertility levels. Controlling only for duration of marriage, migratory status is significant in predicting fertility in only four of the seven cities: Rio, Mexico, Panama, and Caracas. In the case of Mexico and Panama, the difference was only for those in the longer-married group; while, for Caracas, it was in the younger couples. The difference between the groups in Rio was significant for both duration-of-marriage groups. In all cases, with the possible exception of Mexico, the difference seems to come from the fact that rural migrants had much higher fertility than did either urban migrants or urban natives. In most samples, urban natives and urban migrants had quite similar mean parity.

Having initially established some effects of migratory status, the next question to be answered is whether such effects are altered by the introduction of socio-economic controls. Education and occupational status are known to be inversely related to fertility; but they are also distributed differently among the different migratory status groups. In order to make comparisons among migrant status groups, then, we must control other related factors. We decided to look at the effects of controls for education, husband's occupational status, social mobility of the wife, and age at arrival on the relationship between fertility and migratory status. For each sample, each duration of marriage group, and each migrant status group, we looked at fertility means for the various levels of the control variables. Within each group, we calculated F-ratios to test for the effects of these variables.

The complete results of these comparisons can be seen in Tables A through G of the Appendix (one for each city). The summary table (Table 2) shows the F-values, degrees of freedom, and probabilities associated with these values for the means given in Tables A through G.

It is clear from the data presented that the two most influential factors on fertility within the different migrant statuses are education and occupational status. This is true for both migrant groups and for urban natives as well. Almost all of the seven samples show significant differences in mean fertility for the different educational and occupational groups. The other variables — social mobility and age at arrival — had little significant effect. Examination of the detailed tables (see Appendix, Tables A-G) reveals that, in most cases, the higher mean parity of rural migrants is somewhat mitigated when the socio-economic status

variables of education or occupation are controlled. On the other hand, it can be observed that education and occupational status seem to be strongly related to fertility among all migrant statuses. Education seems clearly to be the most important controlling factor for comparing migrant statuses.

In most cases there is almost no difference between urban natives and urban migrants at equal educational levels. One interesting difference we do find, however, is that at the low education level, in six of the seven cities, urban migrants have lower mean fertility than do urban natives among those married at least 15 years.

When comparing rural migrants with urban migrants, we find that the differences are usually slight at equal educational levels for the 14 years or less marriage group. For the 15 years or more group, again, there are some rather unexpected results. At the lowest educational level, rural migrants had slightly lower fertility means than urban natives in Buenos Aires, Bogota, San Jose, and Mexico; at other education levels, rural migrants had higher fertility. The most consistent finding here is that rural migrants tend to have higher fertility than the other groups, even at equal levels of the control variables, with some notable exceptions. However, the relationship seems to vary between different cities, especially when we look at specific educational levels.

Thus far, we have seen that several factors seem to affect the number of children a woman will have — education, occupational status, and, perhaps, place of origin. The crucial question now becomes which of these characteristics are the most relevant in terms of predicting family size. Since the variables we are dealing with are highly intercorrelated, then we have the problem of multicollinearity; we cannot come up with good estimates of the separate effects of these variables. However, by the use of MCA, we can estimate the unique variance⁷ explained by each variable, thereby making possible their ordering in terms of importance above and beyond their 'joint' or correlated effects. The unique variance can be obtained by dividing the partial sum of squares accounted for by the model, and multiplying by 100. It can also be interpreted as a measure of the additional variance explained by adding the particular variable to the model which already includes the other variables.

(Text continued on page 250)

TABLE 2
F-Ratios, Degrees of Freedom, and Significance for the Effects on Fertility of Selected Variables,
by Migratory Status and Duration of Marriage

	Urban Natives			Urban Migrants			Rural Migrants		
	F-value	DF ₂ ^a	Prob	F-value	DF ₂ ^a	Prob	F-value	DF ₂ ^a	Prob
<i>MARRIED 14 YEARS OR LESS</i>									
<i>Education</i>									
Buenos Aires	0.17	496		0.62	150		0.57	140	
Rio de Janeiro	21.14	528	***	13.24	505	***	3.17	38	
Bogota	1.73	262		1.88	171		0.27	678	
San Jose	12.75	456	***	5.03	176	**	6.56	251	**
Mexico City	11.64	493	***	2.72	264		3.33	280	
Panama	8.26	432	***	1.46	211		4.05	349	*
Caracas	8.46	260	***	7.21	305	**	4.49	218	*
<i>Husband's Occupation</i>									
Buenos Aires	1.85	472		0.48	146		0.31	138	
Rio de Janeiro	13.30	488	***	12.23	458	***	0.02	35	
Bogota	0.66	238		1.93	159		0.62	590	
San Jose	8.29	392	***	2.60	156		1.69	222	
Mexico City	2.66	438		5.80	242	**	4.61	249	*
Panama	4.75	360	**	2.34	179		0.52	294	
Caracas	2.48	217		1.52	258		1.47	164	
<i>Father's Occupation</i>									
Buenos Aires	2.62	482		0.47	140		0.40	133	
Rio de Janeiro	5.93	488	**	6.21	473	**	1.01	136	

TABLE 2 (Continued)

	Urban Natives			Urban Migrants			Rural Migrants		
	F-value	DF ₂ ^a	Prob	F-value	DF ₂ ^a	Prob	F-value	DF ₂ ^a	Prob
<i>Father's Occupation (Continued)</i>									
Bogota	0.66	251		1.34	169		0.31	651	
San Jose	13.92	436	***	2.55	165		0.18	243	
Mexico City	2.80	471		1.77	253		3.88	269	*
Panama	2.41	397		0.24	201		1.27	340	
Caracas	0.19	252		2.47	285		2.08	200	
<i>Mobility</i>									
Buenos Aires	2.78	417		2.26	120		1.51	108	
Rio de Janeiro	1.44	175		0.98	153		0.04	6	
Bogota	0.45	85		1.27	128		0.85	438	
San Jose	0.72	320		2.13	122		3.06	167	
Mexico City	0.23	346		0.54	200		0.52	205	
Panama	1.08	243		0.16	114		0.73	208	
Caracas	0.36	145		0.01	180		0.71	95	
<i>Age at Arrival</i>									
Buenos Aires				1.78	144		0.24	138	
Rio de Janeiro				0.53	483		1.87	37	
Bogota				0.96	171		10.05	673	***
San Jose				0.29	172		2.86	248	
Mexico City				1.12	264		2.66	279	
Panama				2.62	206		1.20	329	
Caracas				0.96	303		0.84	212	

TABLE 2 (Continued)

	Urban Natives				Urban Migrants				Rural Migrants			
	F-value	DF ^a ₂	Prob	F-value	DF ^a ₂	Prob	F-value	DF ^a ₂	F-value	DF ^a ₂	Prob	Prob
<i>MARRIED 15 YEARS OR MORE</i>												
<i>Education</i>												
Buenos Aires	1.80	339		0.25	134		0.34	114				
Rio de Janeiro	16.02	398	***	14.74	377	***	2.14	18				
Bogota	7.22	153	**	2.24	113		0.84	407				
San Jose	7.56	307	***	4.40	139	*	0.97	173				
Mexico City	11.14	298	***	15.58	251	***	0.53	245				
Panama	9.91	310	***	2.36	146		6.77	271			**	**
Caracas	4.46	144	*	1.04	219		13.07	221			***	***
<i>Husband's Occupation</i>												
Buenos Aires	0.70	303		1.48	117		3.49	99			*	*
Rio de Janeiro	12.93	319	***	10.09	278	***	1.75	13				
Bogota	4.65	122	*	1.60	83		0.61	293				
San Jose	6.05	253	**	4.76	105	*	4.69	123			*	*
Mexico City	13.03	240	***	5.62	205	**	0.91	183				
Panama	5.99	223	*	0.97	116		0.61	207				
Caracas	1.28	91		3.87	149	*	4.91	141			**	**
<i>Father's Occupation</i>												
Buenos Aires	3.34	335	*	1.14	128		0.48	107				
Rio de Janeiro	4.55	377	*	9.45	342	***	0.77	17				

TABLE 2 (Continued)

	Urban Natives			Urban Migrants			Rural Migrants		
	F-value	DF ^a ₂	Prob	F-value	DF ^a ₂	Prob	F-value	DF ^a ₂	Prob
<i>Father's Occupation (Continued)</i>									
Bogota	3.58	145	*	1.41	109		0.90	387	
San Jose	2.89	289		2.17	132		2.78	166	
Mexico City	7.13	284	**	8.63	240	***	0.89	237	
Panama	1.90	290		0.01	136		0.66	254	
Caracas	2.77	133		2.15	200		2.26	207	
<i>Mobility</i>									
Buenos Aires	2.75	251		1.81	97		2.19	78	
Rio de Janeiro	2.75	109		5.14	76		0.84	5	
Bogota	1.17	89		0.54	59		0.51	16	
San Jose	0.16	202		0.63	80		2.25	105	
Mexico City	0.66	186		0.08	157		0.95	137	
Panama	1.57	129		0.18	67		0.79	138	
Caracas	0.88	64		0.71	87		1.86	75	
<i>Age At Arrival</i>									
Buenos Aires				0.45	132		2.84	116	
Rio de Janeiro				6.46	362	**	2.67	18	
Bogota				1.21	112		2.33	404	
San Jose				1.59	139		2.15	172	
Mexico City				0.25	250		0.39	245	
Panama				1.26	138		0.68	247	
Caracas				0.39	216		0.23	214	

*** p > .001

** p > .01

* p > .05

a DF₁ = 2

Table 3 gives the F-values, probabilities, and unique variances of each effect for the seven samples controlling for duration of marriage. The degrees of freedom are included in part to give an indication of the size of the sample for this analysis. (The total sample size would be the sum of the two degrees of freedom plus one.)

If we choose the .05 significance level, then we note that the partial effect of wife's education was a 'significant' factor in mean fertility for all samples of those married 14 or fewer years, with the sole exception of Buenos Aires, where none of the partial factors studied were significant. Also in addition to the contribution of education, the occupational status of the husband was a significant partial factor in two samples of 14 or less years of marriage — Bogota and Mexico City. And in San Jose, the wife's father's occupation was an important factor, although less so than the wife's education.

For the longer married group, the partial effect of wife's education was significant beyond the .05 level in only four cities: Rio, Bogota, Panama, and Caracas. Husband's occupational status was significant in three cities — Rio, San Jose, and Mexico City. Migrant status was somewhat more important among this group than among those married 14 or fewer years. Remembering that with the one-way analysis of variance in the earlier part of this paper we found a migrant status difference in Rio, Mexico, and Panama for the longer-married group, we find that the effect is still significant in Rio, somewhat less so in Panama, and even less so in Mexico. Still, the UVE for this effect is small — only in Rio can we say that there still seems to be an important unique effect of migrant status on parity, over and above the joint effects of the others.

As for the other independent variables, husband's occupational status seems to be of some unique importance in predicting parity when the other factors are controlled. In San Jose, especially, this is true, where surprisingly, wife's education seems to have had almost no effect after husband's occupation was controlled. The partial effect of wife's father's status was not significantly related to fertility in any of the samples looked at, except for the younger group in San Jose. Overall, San Jose seems to present a different pattern than do the other cities.

In most of the samples analyzed the sum of the unique effects of the four variables was quite small, often only half or less of the total variance explained for the complete model. Two obvious conclusions

come to mind immediately: (1) The relative significance of the four independent variables in predicting fertility while controlling the other seems to go in the sequence of wife's education, then husband's occupational status, followed by the others which had very little effect. This ranking in importance was true for most samples, regardless of duration of marriage. (2) Overall, the unique effects of even the most important variables are small even when significantly non-zero. This is due to the fact that the variables are highly inter-correlated and thus we cannot partition their joint effects into various component effects. However, the total variance explained by the models could be improved if we increased the number of categories (and thus the degree of precision of measurement) in the ordinal variables (education and occupation). Since our purpose was to compare relative effects of education, occupational status, and migration, however, we felt it necessary to keep the numbers of levels of each variable equal, in part, to keep the number of cases in the sub-groups large enough to give good estimates of mean and variances; and partly because of another problem: in dummy variable analysis, the more levels of each variable in the model, the more variance is explained, since each dummy variable will probably contribute something to the total sums of squares. (The addition of a variable to a model must either increase the total variance explained or have no effect — it cannot decrease it.) Thus, the choice of the three-level education categories was a conservative procedure used for the purpose of eliminating bias due to unequal numbers of levels. Even if we improved the TVE this way, however, the unique coefficients would not change much.

We believe that enough evidence has been presented to conclude that the education of the wife and the occupational status of the husband are of more importance than either migration or the wife's original status in predicting fertility. However, we are not able to conclude finally that migratory status or place of origin is of no effect at all. This is because the joint effects of the four variables are still fairly large, and we cannot break this into its component sources. By looking again at the mean fertility of the various migrant status groups within equal levels of education, we find that migration, as such, has no consistent effect on fertility (as is seen in comparing urban natives with urban migrants).

(Text continued on page 255)

TABLE 3
F-values, Probabilities, and Unique Effects for Partial Sum
of Squares of Four Independent Variables

Sample	Source	F-value	Prob F	T.V.E.*	U.V.E.*
<i>Total Sample</i>					
Buenos Aires	Migration	0.313	.736	1.69	0.05
	Wife's Education	7.236	.001		1.15
	Husband's Occupation	1.824	.160		0.29
	Father's Occupation	1.074	.343		0.17
Rio de Janeiro	Migration	1.622	.196	10.29	0.20
	Wife's Education	34.169	.0001		4.12
	Husband's Occupation	7.502	.0009		0.90
	Father's Occupation	0.438	.6513		0.05
Bogota	Migration	0.075	.927	1.61	0.01
	Wife's Education	5.682	.003		0.78
	Husband's Occupation	0.432	.655		0.06
	Father's Occupation	0.167	.847		0.02
San Jose	Migration	0.443	.648	6.54	0.07
	Wife's Education	11.684	.0001		1.82
	Husband's Occupation	4.378	.012		0.68
	Father's Occupation	4.968	.007		0.78
Mexico City	Migration	0.878	.581	6.68	0.10
	Wife's Education	22.440	.0001		2.78
	Husband's Occupation	3.985	.018		0.49
	Father's Occupation	1.447	.234		0.18
Panama	Migration	0.897	.589	7.34	0.12
	Wife's Education	30.975	.0001		4.39
	Husband's Occupation	1.618	.1967		0.23
	Father's Occupation	0.491	.6182		0.07
Caracas	Migration	1.304	.271	8.78	0.25
	Wife's Education	25.134	.0001		4.69
	Husband's Occupation	0.664	.519		0.12
	Father's Occupation	0.160	.853		0.03

*T.V.E. and U.V.E. are total variance explained and unique variance explained, respectively.

TABLE 3 (Continued)

Sample	Source	F-value	Prob F	T.V.E.*	U.V.E.*
<i>Married 14 Years or Less</i>					
Buenos Aires	Migration	0.24	.792	1.08	0.06
	Wife's Education	1.25	.286		0.34
	Husband's Occupation	1.09	.338		0.30
	Father's Occupation	1.14	.322		0.31
Rio de Janeiro	Migration	1.98	.136	9.60	0.39
	Wife's Education	15.24	.0001		3.00
	Husband's Occupation	4.79	.008		0.94
	Father's Occupation	0.45	.644		0.39
Bogota	Migration	0.57	.573	1.54	0.11
	Wife's Education	3.39	.033		0.70
	Husband's Occupation	0.21	.809		0.04
	Father's Occupation	0.15	.859		0.03
San Jose	Migration	2.12	.118	5.77	0.54
	Wife's Education	6.44	.002		1.65
	Husband's Occupation	1.84	.157		0.47
	Father's Occupation	3.84	.021		0.98
Mexico City	Migration	2.31	.098	4.66	0.49
	Wife's Education	6.22	.002		1.33
	Husband's Occupation	3.80	.022		0.81
	Father's Occupation	0.23	.798		0.04
Panama	Migration	0.14	.868	4.99	0.04
	Wife's Education	11.67	.0001		2.82
	Husband's Occupation	1.30	.273		0.32
	Father's Occupation	0.05	.956		0.01
Caracas	Migration	2.35	.094	8.08	0.71
	Wife's Education	12.81	.0001		3.87
	Husband's Occupation	0.35	.708		0.10
	Father's Occupation	0.17	.846		0.05

*T.V.E. and U.V.E. are total variance explained and unique variance explained, respectively.

TABLE 3 (Continued)

Sample	Source	F-value	Prob F	T.V.E.*	U.V.E.*
<i>Married 15 Years or More</i>					
Buenos Aires	Migration	0.212	.811	2.01	0.08
	Wife's Education	1.011	.366		0.40
	Husband's Occupation	0.722	.509		0.28
	Father's Occupation	2.512	.080		0.99
Rio de Janeiro	Migration	6.206	.002	15.08	1.87
	Wife's Education	9.611	.0002		2.91
	Husband's Occupation	7.067	.001		2.14
	Father's Occupation	0.942	.608		0.28
Bogota	Migration	0.045	.956	4.51	0.02
	Wife's Education	3.059	.046		1.22
	Husband's Occupation	1.730	.176		0.62
	Father's Occupation	1.941	.143		0.77
San Jose	Migration	1.847	.157	8.59	0.73
	Wife's Education	0.114	.892		0.05
	Husband's Occupation	7.208	.001		2.87
	Father's Occupation	2.408	.089		0.95
Mexico City	Migration	2.724	.065	8.29	0.82
	Wife's Education	2.599	.073		0.79
	Husband's Occupation	4.511	.011		1.37
	Father's Occupation	1.465	.230		0.44
Panama	Migration	2.901	.054	7.14	1.04
	Wife's Education	5.950	.003		2.17
	Husband's Occupation	2.528	.079		0.92
	Father's Occupation	0.029	.972		0.01
Caracas	Migration	1.303	.972	8.25	0.68
	Wife's Education	5.153	.007		2.67
	Husband's Occupation	2.227	.107		1.16
	Father's Occupation	0.209	.814		0.11

*T.V.E. and U.V.E. are total variance explained and unique variance explained, respectively.

CONCLUSION

Zarate and Zarate (1975) presented a paper in which they pointed out various conflicting findings in the area of migration and fertility research. They pointed out the need for more well-developed and precisely stated theoretical frameworks in which to carry out such research. Clearly, as our rather preliminary results have shown, the relationship between migration as such and fertility is more complex than has sometimes been assumed. Even though the partial effects of migration are usually nonsignificant when controlling for other factors such as education and occupational status, the joint effects of the various components are usually as large as the partial effects together. When education was held constant, we found that migrant status did in some samples seem to make some differences, but these effects were not always consistent from sample to sample and for the various educational levels. Our study has the advantage of using the same methodology for a varied group of samples, so the differences between the samples cannot be due to different methodologies. Any thorough explanation of the relationships of migration to fertility must come to grips with the differences presented by cities at different stages of economic development and/or demographic transition. However, we have shown here that most of the variation between the migrant status groups is due to educational and socio-economic status variation. Secondly, migration itself must be separated from place of birth analytically (see Ritchey and Stokes, 1972), since we have found that most of the differences in most samples are between place-of-origin groups (rural migrant versus urban migrant) rather than between migrant-nonmigrant groups from urban backgrounds. If we really want to be consistent in looking for a migration-effect, then we should compare rural migrant with rural natives of the same country — as we compare urban migrants to urban natives. (Of course this presents many more problems if seriously pursued.)

It was mentioned early in the paper that we saw three different levels of fertility in the samples, representing different stages in the transition from high to low fertility of modernizing societies. In high fertility societies, we might hypothesize that the value changes associated with urbanization have not yet taken hold. Even though people are forced into cities for economic reasons, the values of the urban

dwellers (even the urban natives) are much more like those of their rural counterparts. When the transition from agrarian to urban society is well underway, however, fertility in urban places begins to fall, as 'urban' values begin to develop. Thus, in cities where fertility appears to be declining we would expect the value difference between the rural and urban born to increase, as illustrated by higher fertility differentials. After a society has come through the transitional stage and has reached a fairly stable state of low fertility, then we would expect the difference between rural and urban values again to decrease. At this point, however, it is the urban values which set the standards for the entire society; rural people become more like their urban counterparts.

If we look at the samples of those married 15 years or more, we can see evidence for the hypothesized relationship. If we look at the lowest educational level (where the strongest differences should appear), Buenos Aires (with a low level of fertility) shows very little difference between the rural-born and urban-born. Rio, a city in transition with intermediate fertility, shows the largest differences between rural and urban-born individuals, although the number of rural migrants here is rather small. The other cities, in the main, have relatively high levels of fertility, and they show less difference between the urban natives and rural migrants at equal educational levels.

Obviously, this is an area which requires much more thought and research using more samples, but the evidence seems highly suggestive.

NOTES

¹ The other three components are: population growth itself, change of definition or classifications of the localities and cities, and the residual. For discussion and elaboration of these components see Davis (1965) and Arriaga (1969).

² Since most of the arguments are well established in the field of demography, an extensive reference list is omitted. Previous studies relevant to the present paper may be found in Rele and Kanitkar (1974) and Iutaka, Bock, and Varnes (1971).

³ For a description, see Miró (1966).

⁴ C. A. Moser and J. R. Hall, 'The Social Grading of Occupations', in D. V. Glass (ed.), *Social Mobility in Britain* (London, 1954), 29-50. The six status

(occupational) categories used are: (1) Professional and high administrative; (2) Managerial and executive; (3) Inspectional, supervisory and other non-manual (higher grade); (4) Inspectional, supervisory and other non-manual (lower grade); (5) Skilled manual; (6) Semi-skilled and unskilled manual. See, B. Hutchinson and C. Castaldi, 'A Hierarquia de Prestígio das Ocupações', in B. Hutchinson (ed.), *Mobilidade e Trabalho* (Rio de Janeiro, 1960), 19-51.

⁵ Frank Andrews, James Morgan and John Sonquist, *Multiple Classification Analysis* (Ann Arbor: 1971), University of Michigan, Institute of Social Research. All computations were carried out at the Northeast Regional Data Center, University of Florida, Gainesville.

⁶ For further discussion of this procedure, see Andrews, et al., op cit., and Blau and Duncan, 1967, 128-140.

⁷ This is what Blau and Duncan call 'net effect' and is also referred to as the 'partial effect'.

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A P P E N D I X

(Tables A-G)

TABLE A
Mean Fertility of Ever-Married Women in Buenos Aires by Migrant Status, Duration of Marriage,
and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives			Urban Migrants			Rural Migrants			Urban Natives		
	\bar{X}	N		\bar{X}	N		\bar{X}	N		\bar{X}	N	
<i>Mobility</i>												
Upward	1.55	197		1.57	60		1.57	44		2.45	120	
Same	1.31	162		1.17	36		1.20	51		2.01	99	
Downward	1.56	61		1.22	27		1.31	16		2.57	35	
<i>Education</i>												
Low	1.38	8		1.00	8		1.64	22		2.91	11	
Medium	1.45	282		1.44	94		1.38	98		2.19	266	
High	1.39	209		1.39	51		1.39	23		2.45	65	
<i>Husband's Occupation</i>												
Upper	1.67	64		1.64	11		1.30	10		2.30	40	
Middle	1.41	262		1.32	68		1.52	44		2.34	147	
Low	1.39	149		1.44	70		1.39	87		2.27	119	
<i>Father's Occupation</i>												
Upper	1.55	33		1.64	11		1.20	5		2.79	24	
Middle	1.53	240		1.30	57		1.31	36		2.06	154	
Low	1.31	212		1.36	75		1.46	95		2.37	160	
<i>Age at Arrival</i>												
0-14				1.60	53		1.49	53		2.41	37	
15-24				1.31	74		1.44	68		2.21	53	
25+				1.15	20		1.30	20		2.53	45	

TABLE C
Mean Fertility of Ever-Married Women in Bogota by Migrant Status, Duration of Marriage,
and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives			Urban Migrants			Urban Natives			Urban Migrants		
	Rural Migrants			Rural Migrants			Rural Migrants			Rural Migrants		
	\bar{X}	N		\bar{X}	N		\bar{X}	N		\bar{X}	N	
<i>Mobility</i>												
Upward	3.16	56		2.92	47	3.18	5.25	24		5.57	23	5.82
Same	2.85	85		3.16	58	3.10	5.90	50		5.79	24	6.28
Downward	3.00	41		2.39	26	3.41	4.89	18		4.80	15	5.92
61												
<i>Education</i>												
Low	3.17	58		3.23	39	3.02	6.61	44		3.31	29	5.79
Medium	2.63	92		3.06	47	3.08	4.86	59		3.31	41	5.44
High	2.69	115		2.46	88	2.93	4.68	53		2.58	46	5.32
76												
<i>Husband's Occupation</i>												
Upper	2.76	45		2.38	42	2.85	4.33	21		4.83	29	5.43
Middle	2.64	50		3.20	49	3.11	5.16	25		5.67	18	5.95
Low	2.97	146		2.97	71	3.18	6.13	79		6.15	39	6.11
209												
<i>Father's Occupation</i>												
Upper	2.81	32		2.28	25	3.27	4.32	22		4.33	18	4.84
Middle	2.55	65		2.79	63	2.96	4.92	39		5.45	49	5.77
Low	2.87	157		3.05	84	3.04	5.85	87		5.78	45	5.66
278												
<i>Age at Arrival</i>												
0-14				2.83	46	2.92				5.75	28	6.00
15-24				2.70	97	2.91				4.65	31	5.15
25+				3.29	31	3.90				5.59	56	5.69
176												

TABLE D
Mean Fertility of Ever-Married Women in San Jose by Migrant Status, Duration of Marriage,
and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives			Urban Migrants			Urban Natives			Urban Migrants		
	\bar{X}	N		\bar{X}	N		\bar{X}	N		\bar{X}	N	
<i>Mobility</i>												
Upward	2.75	130		2.63	46		5.14	90		5.56	34	
Same	3.01	156		3.36	62		5.40	90		5.50	40	
Downward	2.87	37		2.47	17		5.40	25		4.33	9	
<i>Education</i>												
Low	3.21	73		3.55	38		6.10	74		5.00	43	
Medium	3.24	201		2.23	79		5.12	160		5.77	62	
High	2.40	185		2.29	65		4.18	76		4.00	37	
<i>Husband's Occupation</i>												
Upper	2.56	57		1.89	18		4.25	28		3.92	13	
Middle	2.57	137		2.74	46		4.59	86		4.77	35	
Low	3.28	201		3.06	95		5.81	142		6.17	60	
<i>Father's Occupation</i>												
Upper	1.91	35		1.14	7		3.30	10		3.75	8	
Middle	2.39	98		2.57	53		4.74	74		4.60	37	
Low	3.19	306		2.85	108		5.35	208		5.38	90	
<i>Age at Arrival</i>												
0-14				2.82	88					4.55	53	
15-24				2.58	69					5.61	43	
25+				2.61	18					5.20	46	

TABLE E
Mean Fertility of Ever-Married Women in Mexico City by Migrant Status, Duration of Marriage,
and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives			Urban Migrants			Urban Natives			Urban Migrants		
	\bar{X}	N		\bar{X}	N		\bar{X}	N		\bar{X}	N	
<i>Mobility</i>												
Upward	2.92	129		3.22	64		5.24	72		5.12	57	
Same	3.07	137		3.43	89		5.75	64		5.36	66	
Downward	3.04	83		3.60	50		5.19	53		5.22	37	
<i>Education</i>												
Low	3.45	67		3.59	90		6.26	84		6.08	95	
Medium	3.15	237		3.18	110		5.15	129		5.31	103	
High	2.43	192		2.87	61		4.08	88		3.20	56	
<i>Husband's Occupation</i>												
Upper	2.92	89		2.96	48		4.02	46		4.00	42	
Middle	2.70	135		2.88	65		4.71	72		5.13	62	
Low	3.17	217		3.74	132		6.33	125		5.95	104	
<i>Fathers' Occupation</i>												
Upper	2.83	72		2.71	38		4.04	51		3.47	43	
Middle	2.63	137		3.37	76		4.67	91		5.05	87	
Low	3.08	265		3.35	142		5.75	145		5.78	113	
<i>Age at Arrival</i>												
0-14				3.31	128					5.18	100	
15-14				3.30	111					5.11	91	
25+				2.71	28					5.07	62	

TABLE F
Mean Fertility of Ever-Married Women in Panama City by Migrant Status, Duration of Marriage,
and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives		Urban Migrants		Rural Migrants		Urban Natives		Urban Migrants		Rural Migrants	
	\bar{X}	N	\bar{X}	N	\bar{X}	N	\bar{X}	N	\bar{X}	N	\bar{X}	N
<i>Mobility</i>												
Upward	2.44	80	2.19	36	3.19	42	3.80	44	4.38	16	4.79	29
Same	2.69	99	2.39	46	2.79	93	4.00	48	4.60	30	4.52	64
Downward	2.33	67	2.31	34	2.84	76	4.68	40	4.21	24	5.21	48
<i>Education</i>												
Low	3.83	12	3.38	8	3.00	60	5.47	15	4.83	18	5.68	66
Medium	2.91	111	2.34	77	2.86	175	4.34	131	4.18	73	4.84	169
High	2.36	312	2.43	129	2.32	117	3.41	167	3.55	58	3.67	39
<i>Husband's Occupation</i>												
Upper	2.12	81	1.89	27	2.52	21	3.36	45	3.33	12	5.20	15
Middle	2.58	50	2.38	29	3.07	29	3.40	30	4.15	13	4.27	15
Low	2.79	232	2.64	126	2.82	247	4.46	151	4.33	94	5.06	180
<i>Father's Occupation</i>												
Upper	2.03	39	2.83	6	2.50	8	3.50	34	4.00	10	3.60	5
Middle	2.29	52	2.55	29	2.19	31	3.49	51	4.06	18	4.62	21
Low	2.57	309	2.43	169	2.74	304	4.08	208	4.09	111	4.91	226
<i>Age at Arrival</i>												
0-14			2.51	92	2.72	142			3.83	57	4.91	99
15-24			2.53	101	2.59	166			3.80	59	4.83	92
25+			1.56	156	3.21	24			4.64	25	5.35	58

TABLE G

Mean Fertility of Ever-Married Women in Caracas by Migrant Status, Duration of Marriage, and Selected Socio-economic Variables

	Married 14 Years or Less						Married 15 Years or More					
	Urban Natives			Urban Migrants			Urban Natives			Urban Migrants		
	\bar{X}	N		\bar{X}	N		\bar{X}	N		\bar{X}	N	
<i>Mobility</i>												
Upward	2.44	69		2.75	67		6.09	22		4.79	34	
Same	2.69	58		2.74	78		6.17	29		5.47	43	
Downward	2.52	21		2.79	38		5.00	16		5.69	13	
<i>Education</i>												
Low	3.38	42		3.09	113		5.78	55		5.39	107	
Medium	2.56	130		2.76	114		5.72	68		5.13	90	
High	2.08	91		2.06	81		3.46	24		4.44	25	
<i>Husband's Occupation</i>												
Upper	2.59	39		2.51	43		5.00	17		4.19	27	
Middle	2.27	70		2.55	65		5.86	21		5.21	34	
Low	2.88	111		2.97	153		6.32	56		5.92	91	
<i>Father's Occupation</i>												
Upper	2.23	13		2.16	19		3.43	14		4.19	16	
Middle	2.56	50		2.35	55		6.13	24		4.43	37	
Low	2.52	190		2.86	214		5.48	98		5.35	150	
<i>Age at Arrival</i>												
0-14				2.74	132					5.35	60	
15-24				2.60	147					4.93	80	
25+				3.15	27					5.23	77	

MOTIVATION FOR MIGRATION OF WELFARE CLIENTS

Gordon F DeJong and Zafar M N Ahmad

INTRODUCTION

In post-industrial societies of Europe undoubtedly the current most significant movement of people is associated with the migration of workers (McDonald, 1969). Governmental controls on such migrations as well as the problems raised by them are part of the mosaic of developed countries population mobility. However, effective policies depend in part on understanding the dynamics of the migratory process, including the motivational factors of migratory groups. The substantial differences in workers' wages between nations has stimulated migration for workers who place economic concerns as primary goals but whose aspirations are generally lower or at least less specific than residents in the country of destination (McDonald, 1969:9). However, a largely unspecified range of cultural, social, and psychological factors influence popular perceptions of conditions within a prospective area of destination.

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In the United States recent concern has focused on a somewhat similar migration of predominantly Southern-born black and white workers and their families to northern and western metropolitan centers. A popular belief is that the poorer migrants are greatly attracted by the higher levels of welfare payments generally available in these cities. However, recent research tends to reject this popular belief (Long, 1974; DeJong and Donnelly, 1973; Steiner, 1971; Sternlieb and Indike, 1973; Piven and Cloward, 1971; Beale, 1971). Nevertheless, little systematic evidence has emerged in place of this thesis concerning reasons for migration or the frequency of movement of the welfare poor. Pursuing these themes, the present paper has two purposes: first, we investigate the frequency of residential mobility of welfare clients, and second, we examine reasons welfare clients give for migration to their present community. Our evidence is from interviews with a precision-matched sample of welfare recipients and a control group of persons not on welfare in a large northern US state.

MIGRATION AND THE WELFARE POOR

While an answer to the question why the welfare poor move cannot be directly ascertained without detailed behavioral data, variations in the aggregate mobility rate and the statements of respondents provide clues to factors which influence the decision to move.

Indirect evidence on the frequency of migration of welfare clients can be deduced by comparing important factors in differential migration with a profile of welfare clients. Differential migration refers to the fact that people with certain characteristics appear systematically predisposed to move. Morrison's (1972) review suggests that the main features of differential migration in the United States are age, changes in marital status, occupation and employment status, educational attainment, race, and past mobility experience. High mobility rates are characteristic of individuals in their twenties; of persons at the time of marriage and family formation, as well as at the time of the

dissolution of marriage through separation or divorce; of persons who have occupations that are highly skilled or specialized; of men who work part-time or who are unemployed; of persons with higher educational attainment; of non-whites (although whites have a higher migration rate over long distances); and for persons with a history of past moves for whom geographic mobility is a repetitive episode. Although systematic evidence is not available for the welfare poor, many of these generalizations would seem to conform to the characteristics of this population. For example, our sample of welfare clients was predominantly separated or divorced young adults with below average educational attainment and low family income. Compared with national averages, a disproportionally large proportion of welfare clients were non-white and unemployed. While this is not the entire matrix of factors which contribute to high residential mobility, it is sufficient to posit the hypothesis that welfare poor will exhibit a higher residential mobility than would be expected for the total population.

Turning to the motivation for migration as expressed at the micro-demographic level by reasons for moving as reported by migrants, there is little evidence on which to base a hypothesis concerning the welfare poor. To begin, it is well to note that reasons given by migrants cannot be equated with causes of migration. Reasons may reflect causes in the sense that certain people respond to 'push' and 'pull' factors at areas of origin and areas of destination. However, other respondents may be relatively inarticulate in summarizing the components of a migration decision. Elizaga (1972:137) summarizes Germani's position as follows:

... this decision is a complex psychological process, in which the rational component is often less important than the irrational. It is also considered that the so-called 'objective elements' operating as 'push' and 'pull' forces – including motivations – always operate within a normative and psycho-social context and there, standards, values, and beliefs of the respective society should be considered as intervening variables in the analysis of factors.

We note, however, that people's moving behavior exhibits a degree of rationality, and the decisions can be viewed as though they resulted from at least some degree of calculated assessment of alternatives.

The most comprehensive source of United States data on reasons

for movement of household heads is Lansing and Mueller's (1967) nationwide survey of labor force mobility. This study provides an excellent basis for developing hypotheses about reasons for migration. They note (1967:38) that 58 percent of the household heads who had moved during the past five years gave purely economic reasons for moving, while an additional 14 percent gave partly economic reasons plus either family or community reasons or both. Twenty-three percent of the respondents gave non-economic reasons such as family or community, and five percent of the respondents gave no reasons. In summarizing their analysis, the authors suggest the following generalization:

... First, judging by people's own explanations, the decision to move among members of the labor force is strongly dominated by job-economic reasons. Secondly, economic incentives seem to play the greatest role among the groups in the labor force which have the strongest economic position – the well-educated, the middle-aged, and the white-collar workers. The groups which are in a weaker position may move because of serious economic pressures (such as lack of work), or occasionally because the employer initiates a move. The more optional types of moves, directed primarily toward higher earnings, or professional advancement, are relatively infrequent among blue-collar workers, older people, and the less educated. . . . (Lansing and Mueller, 1967:66).

Since a majority of the welfare poor reside in cities, the findings of Metropolitan Migration Studies of why families move may also be relevant. Rossi's (1955) data emphasized the importance of housing and neighborhood characteristics in local area migration decisions, while home ownership and general quality of living environment issues have been noted by other researchers (cf. Butler, et al., 1969; Speare, 1970; and Speare, 1974). The ecological concentration of non-whites in United States central cities suggests that housing and neighborhood issues may be applicable in the case of welfare poor.

Based on these studies and other research which tends to reject the popular belief that poor migrants are attracted by higher levels of welfare payments, we propose the following general hypothesis as a guide for testing reasons for migration of the welfare poor: compared with Lansing and Mueller's nationwide survey results, the welfare poor are expected to give less emphasis to economic reasons and more emphasis to non-economic reasons for moving.

METHODOLOGY

Data for this paper are from a social service need survey of Pennsylvania, conducted by the Pennsylvania Field Research Laboratory during 1972-73. Two sampling strategies were employed: (1) a multi-stage stratified area probability sample of all households in the state, and (2) a special random sample drawn from the Pennsylvania welfare recipients' name and address list. The socio-economic characteristics of the 1,047 sample households matched very closely the census characteristics for the state. The supplementary sample of 152 welfare recipients included all major categories of welfare — aid to families with dependent children, general assistance, aid to the blind, aid to the disabled, and old-age assistance. About 70 percent of the special survey respondents were aid to families with dependent children (AFDC) and general assistance clients. AFDC is a federal participation program for families in financial need by means of grant-in-aid to states, while general assistance is a state program for people in need who do not qualify for AFDC or one of the other federally funded programs.

For purposes of this study, a migrant was defined as a respondent whose last residence was in a different community (different community as defined by the respondent). This definition is more sociological than demographic in character in that it implies a geographic movement where community ties were affected. In our analysis of reasons for migration we thus excluded those whose immediately preceding residence had been within the same community.

As was the case with Lansing and Mueller, our evidence on reasons for migration is based on the recollections of respondents concerning the frequently complex factors underlying the move to their present community. In this paper we present the most important reason given for migration. Obviously this approach to the study of motivations for migration suffers from the methodological inadequacies inherent in a design based on recall information. Evidence on frequency of migration is based on questions concerning length of residence in the present community and at the present address, and the respondent's assessment of the probability of moving within the next year.

The analysis compares welfare and non-welfare respondents on these migration indicators. Even though the larger segment of the data was collected using an area probability sample, the statistical tests of significance used here imply a simple random sample. This will result in a smaller standard error and consequently the relationships will not be tested in conservative terms. However, the major relationships are so pronounced that they hold, even using extremely conservative statistical confidence limits.

As already noted, welfare clients generally have social and demographic characteristics which are different than a random sample of the population. Thus in order to increase the validity of the comparisons between welfare and non-welfare respondents, a separate analysis was pursued where welfare and non-welfare respondents were precision matched on six variables — sex, race, educational attainment, marital status, metropolitan/non-metropolitan residence, and age.¹ Complete information and matching was accomplished for 96 of 131 welfare clients who were defined as migrants. The precision matching technique permits us to test the hypotheses controlling for the influence of these six important variables.

FINDINGS

Mobility Indicators

Because of the interest in black-white differences in public welfare and migration (Long, 1974), the analysis presents results for both groups. Table 1 shows the length of time welfare and non-welfare respondents have lived at their present address. Irrespective of race, the welfare recipients indicated a shorter duration of stay at their present address than non-welfare respondents. The differences are statistically significant at the .001 level for whites as well as for blacks. Comparatively, one of five white non-welfare respondents had lived less than three years at his present address while the ratio for white welfare respondents

TABLE 1
Years at Present Address by Welfare Status and Race
(in percentages)

Years at Present Address	White			Black			Total
	Non- Welfare	Welfare	Total	Non- Welfare	Welfare	Total	
Less than 3	19.0	42.2	22.6	23.8	45.6	33.8	24.1
3 – 10	31.1	41.2	32.6	37.5	41.2	39.2	33.4
11 or more	49.9	16.6	44.8	38.8	13.2	27.0	42.5
Total %	100.0	100.0	100.0	100.1	100.0	100.0	100.0
Total N	840	151	991	80	68	148	1139

Note: In this and the following tables, the percentages may not equal 100.0 due to rounding error. Moreover, due to the variation of the frequency of no response to different items, the total number of cases (N) may not equal the total sample size of 1199.

X^2 for years at present address and welfare status of white = 66.4 $P(\alpha) < .001$

X^2 for years at present address and welfare status of blacks = 14.2 $P(\alpha) < .001$

X^2 for years at present address and race = 17.9 $P(\alpha) < .001$

was less than one in three. In the case of black welfare respondents, the percentages for shorter duration of residence are slightly higher. This higher residential mobility for blacks is consistent with the findings of other studies (McAllister, et al., 1972 and Butler, 1969).

Table 2 on length of residence in the present community provides some insight into differential migration of welfare and non-welfare respondents. Again, irrespective of race, welfare respondents report a shorter duration of residence in their present community than do non-welfare respondents. The differences are statistically significant at the .05 level for both whites and blacks. While about half of both black and white welfare respondents had lived in the community for more than 10 years, the comparable figure for non-welfare respondents was over 60 percent.

Past differential residential migration of welfare and non-welfare populations may not be indicative of future trends. Further agricultural mechanization is not likely to generate significant additional surplus of

TABLE 2
Duration of Stay of Migrants in Present Community
by Welfare Status and Race (in percentages)

Years in Community	White			Black			Total
	Non- Welfare	Welfare	Total	Non- Welfare	Welfare	Total	
Less than 3	12.0	14.6	12.4	10.5	13.2	11.6	12.3
3 – 10	26.1	35.4	27.6	15.8	34.2	23.2	27.0
11 or more	61.9	50.0	60.0	73.7	52.6	65.3	60.7
Total %	100.0	100.0	100.0	100.0	100.0	100.1	100.0
Total N	501	96	597	57	38	95	692
X ² for duration of stay and welfare status of white = 4.84							.1 > P (α) > .05
X ² for duration of stay and welfare status of black = 5.03							.1 > P (α) > .05
X ² for duration of stay and race = 1.0321							.70 > P (α) > .50

poor agricultural workers, and in the light of slackening in the industrial economy, migration between industrial locations may become a less viable option for the welfare poor. Such factors as these might lead us to expect a reduction in the welfare/non-welfare differential in geographic mobility, especially in expectation for moving in the near future. However, the data in Table 3 show that welfare respondents indicated a higher probability of moving within the next year than did non-welfare respondents. The differences were again statistically significant at the .01 level for both black and white respondents. Comparing on race, the differences between black and white non-welfare respondents are negligible but the differences between black and white welfare recipients are notable with 27.5 percent of the black compared with 16.1 percent of the white welfare poor indicating a fair or definite probability of moving within a year. If respondents follow their plans, it would seem that the welfare recipients will continue to be more mobile than the non-welfare population, even in the face of changing social and economic conditions.

In an attempt to explain the consistent mobility differentials between welfare and non-welfare respondents, we pursued further the general logic of differential migration (Goldscheider, 1971). This logic

TABLE 3
Probability of Moving in the Next Year by Welfare Status
and Race (in percentages)

Probability of Move	White			Black			Total
	Non- Welfare	Welfare	Total	Non- Welfare	Welfare	Total	
None or slight chance	92.4	83.9	91.1	90.1	72.5	82.0	89.9
Fair chance	4.4	7.4	4.9	6.2	18.8	12.0	5.8
Definitely	3.2	8.7	4.0	3.7	8.7	6.0	4.3
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total N	839	149	988	81	69	150	1138

X^2 for probability of moving and welfare status of white = 12.77 .01 > P (α) > .001
 X^2 for probability of moving and welfare status of black = 7.9 .02 > P (α) > .01
 X^2 for probability of moving and race = 13.8 .01 > P (α) > .001

suggests that if relevant social and demographic characteristics are controlled, the differences in comparative mobility of sub-populations will tend to disappear. As noted earlier, our methodology for pursuing this part of the analysis was to precision match welfare and non-welfare respondents on the basis of sex, race, educational attainment, marital status, metropolitan/non-metropolitan residence, and age. Data on the probability of moving in the next year for the matched groups are presented in Table 4. Although the differential was somewhat reduced, welfare clients still indicated a higher probability of moving than did non-welfare respondents with similar social and demographic characteristics. Nearly 17 percent of the welfare clients indicated a fair or definite probability of moving compared to just over 10 percent of the precision-matched non-welfare group. Clearly these social and demographic characteristics do not constitute the major explanation for differential welfare/non-welfare mobility expectations.

Another potential explanation for the mobility differentials between welfare and non-welfare respondents may be in home ownership — a factor previous research has identified as an important determinant of

TABLE 4
Probability of Moving in the Next Year by Welfare Status
and Matched Groups (in percentages)

Probability of Moving	Total		Matched Groups	
	Non-Welfare	Welfare	Non-Welfare	Welfare
None or slight chance	92.2	80.3	89.6	83.3
Fair chance	4.6	11.0	6.3	7.3
Definitely	3.3	8.7	4.2	9.4
Total %	100.1	100.0	100.1	100.0
Total N	920	218	96	96

TABLE 5
Probability of Moving in the Next Year by Welfare and
Rent Status: Matched Groups (in percentages)

Probability of Moving	Rent		Owned	
	Welfare	Non-Welfare	Welfare	Non-Welfare
1. None or slight chance	81.6	77.3	90.0	93.2
2. Fair chance	7.9	18.2	5.0	2.7
3. Definitely	10.5	4.5	5.0	4.1
Total %	100.0	100.0	100.0	100.0
Total N	76	22	20	74

mobility (Goldscheider, 1971; Butler, 1969; McAllister, 1972). Table 5 presents the reported probability of moving within the next year for welfare and non-welfare matched groups controlled for whether the respondent was a home owner or renter. Here the differences between welfare and non-welfare respondents almost entirely disappear, but the mobility expectation differences between owners and renters is large. The source of the explanation is in the differential characteristics of owner or renter status. Nearly 80 percent of the non-welfare group were homeowners but only 23 percent of the welfare clients were homeowners, even though they had similar social and demo-

graphic characteristics. Thus housing emerges as a salient explanation for the differential mobility expectations of welfare and non-welfare respondents.

Reasons for Migration to Present Community

Of the numerous potential influences on migration decisions, Table 6 presents information on some of the dominant factors. The data are for the most important reasons given for migration to the present community by black and white respondents by welfare status. While there is considerable similarity between the distributions of most important reasons for black and white respondents, there are some notable differences between the distributions for welfare and non-welfare respondents. Economic related reasons, which account for 35 and 40 percent of non-welfare white and black responses, respectively, account for 23 and 27 percent of welfare white and black responses, respectively. Furthermore, welfare clients, particularly white respondents, were more likely than non-welfare respondents to report migration to the present community because it was financially better to live here, but did not indicate that involved looking for work or taking a job.

The single most important reason welfare clients gave for migration was the presence of relatives or friends in the community. Nearly 27 percent of white welfare clients and 29 percent of black welfare clients gave this as the most important reason. In both cases this is more than twice the percentage for non-welfare respondents. There was, however, little difference between the proportion (around 16 percent) of welfare and non-welfare respondents who reported moving with a parent, spouse, or guardian. The search for a better community and better housing was indicated as the most important reason for approximately 25 to 30 percent of both welfare and non-welfare respondents, while health as a dominant reason was seldom mentioned except by a few welfare clients.

As we have previously argued, a possible explanation for the welfare/non-welfare differential in reasons for migration may be the disparate

TABLE 6
Most Important Reason for Migration to Present Community
by Welfare Status and Race (in percentages)

Reasons for Migration	White		Black	
	Non-Welfare	Welfare	Non-Welfare	Welfare
<i>Family and Friend Reasons</i>				
1. Moved with parents, guardian or spouse	16.5	16.1	20.4	15.8
2. Relatives or friends here	13.1	26.9	11.1	28.9
<i>Economic Reasons</i>				
3. Look for work	5.4	2.2	13.0	7.9
4. To take job	22.5	6.5	18.5	10.5
5. Financially better off here	7.6	14.0	9.3	10.5
<i>Community and Housing Reasons</i>				
6. Better community	15.5	14.7	13.0	10.5
7. Better housing	16.3	11.0	11.0	15.8
<i>Other Reasons</i>				
8. More things to do here	1.0	1.1	1.9	0.0
9. Health	2.0	7.5	1.9	0.0
Total %	99.9	100.0	100.1	99.9
Total N	497	93	54	38

social and demographic characteristics of the two groups. To test this logic, Table 7 presents reasons for migration for the precision-matched group of welfare and non-welfare respondents. The major differentials of welfare clients emphasizing more the importance of relatives and friends and non-welfare emphasizing more economic reasons clearly remain in spite of the statistical controls. Twenty-six percent of welfare clients compared with 15.6 percent of non-welfare respondents gave relatives and friends as the most important reason, while 22.9 percent of welfare clients compared with 32.5 percent of non-welfare respond-

TABLE 7
Most Important Reason for Migration to Present Community
by Welfare Status and Matched Groups (in percentages)

Reasons for Migration	Total		Matched Groups	
	Non-Welfare	Welfare	Non-Welfare	Welfare
<i>Family and Friend Reasons</i>				
1. Moved with parents, guardian or spouse	17.0	17.1	22.9	16.7
2. Relatives or friends here	12.6	28.6	15.6	26.0
<i>Economic Reasons</i>				
3. Look for work	6.0	3.6	9.4	3.1
4. To take job	22.6	7.1	16.8	8.3
5. Financially better off here	8.3	12.9	6.3	11.5
<i>Community and Housing Reasons</i>				
6. Better community	14.7	10.7	10.4	13.5
7. Better housing	15.6	14.3	14.6	14.6
<i>Other Reasons</i>				
8. More things to do here	1.2	0.7	0.0	0.0
9. Health	1.9	5.0	4.1	6.3
Total %	99.9	100.0	100.1	100.0
Total N	570	140	96	96

ents gave economic reasons as dominant. And, as previously noted, welfare clients were considerably less likely to report looking for work or taking a job as the reason for migration but were more likely than non-welfare respondents to report migration because it was financially better to live here. Among other things, this response may tap the perceived attraction of public welfare payment levels. Aside from a slight increase in the proportion of non-welfare respondents reporting they moved with parents, spouse or guardian, the generalizations from the matched data are essentially unchanged by the matched group analysis.

SUMMARY AND DISCUSSION

From our data we conclude that both black and white welfare poor are more migratory than the general population. On all our indicators of residential mobility – (a) years at present address, (b) years in present community, and (c) probability of moving in the next year – welfare respondents had comparatively less residential stability or higher frequency of mobility. The difference remains, although to a lesser degree, for the precision-matched groups. The most apparent explanation for this difference is that the vast majority of welfare poor are renters while even the precision-matched sample of non-welfare respondents own their own homes. This finding fits the literature on home ownership and migration (Goldscheider, 1971: 67-68 and 315-316).

Turning to reasons for migration, it should be noted that the majority of reasons suggested by respondents indicate ‘pull’ factors at areas of destination rather than ‘push’ factors at areas of origin. In fact, only health as a reason for migration could be considered as not specifically tied to area of destination pull factors. Within this context it is clear that black and white welfare respondents do not differ significantly in their response pattern. However, there is a difference between welfare and non-welfare respondents. The most important differences, even in the precision-matched groups, concern the reduced emphasis on economic reasons in the welfare sample as compared with the non-welfare group. In particular, welfare respondents emphasized the role of relatives and friends as reasons for migration, while non-welfare residents are more likely to indicate they moved to their present residence to take a job. There is some difference between the two groups on the response category ‘financially better here’ which may be a crude indicator of the impact of welfare benefits on migration decision-making. The data are consistent in showing that these respondents placed greater emphasis on community and housing reasons than was true in Lansing and Mueller’s random sample of a labor force population.

The importance of non-economic reasons for migration in this subsample as compared with Lansing and Mueller suggests to us support for a greater emphasis on sociologically relevant issues in migration.

Economic incentives may not be the dominant factor for all potential migrant groups in society. From this point of view it is important to identify not only the differential factors which explain why respondents migrated to an area but also to identify the consequences of migration at the area of destination, both from the perspective of the individual migrant and from the perspective of the social organization of the area (Mangalam and Schwarzweller, 1970). While we do not have data to pursue all these aspects of a sociologically relevant migration framework of welfare clients, it is clear that one significant component of this framework would be the family system. Our data suggest that Choldin's (1973) findings concerning kinship networks in the migration process may be quite applicable in the case of the welfare poor. He notes that the kin and friendship network not only provide a basis for decision making about migration, but also facilitate both the migration process and the adjustment to the areas of destination. Far from breaking down kinship ties, the migration process may be hypothesized as an element that strengthens the vitality of such networks.

While local and national employment bureaus and agencies may be able to communicate labor force information to skilled and white-collar segments of the labor force, the emphasis on purely economic motivations would seem less applicable to the welfare poor. For this group the very important impact of the informal aspects of social structure must be recognized. Since informal communication is subject to a much wider latitude of interpretation, it may be more difficult to affect the volume and directional stream of welfare poor. Finally, the relatively higher emphasis, as compared with Lansing and Mueller, on the search for improved housing and community environment points at once to causes of higher residential mobility and to consequences of the urbanization processes which tend to differentiate and segregate the welfare poor into poorer rental housing and deteriorating neighborhoods. Effective policy measures directed toward improving urban quality of life could be predicted to alter not only the structure of reasons for migration, but also the frequency of movement of the welfare poor.

NOTE

¹ On age it was not possible to obtain a precise match for about one-third of the cases. In these instances a case was selected from an adjacent age category.

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IV POLICIES

MIGRATION AND THE AMERICAN NEW TOWN: An Analysis of Patterns of In-Migration to New Communities

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The purpose of this essay is to examine the in-migration to American 'new towns' with regard to three influencing factors: site location, the quest for social balance, and attempts to achieve self-containment or self-sufficiency. Rationale for reviewing migration in terms of these three factors has been provided and prompted by the recent passage of federal legislation stipulating a number of guidelines that new community developers must adhere to if they are to qualify for up to \$50 million in federal loan guarantees.

In this paper migration will largely be thought of as the dependent variable, whose substance and direction are, to a great extent, determined by the government and developers' positions on the issues of social balance, location, and self-containment. Each of these concepts will be initially discussed separately, with attention paid to their present and future status within a national new towns policy. Following will be a review of the interaction that occurs between these three concepts and how this interaction affects the implementation of present federal policy mandates to developers. The essay will conclude with an examination of some data that bears directly on the issues raised, plus a series of suggestions for both policy and implementation improvements. It is not intended that this paper provide the reader with any comprehensive historical review of the new town concept, but for those who desire this

introduction, there are a number of good sources available (Clapp, 1971; Brekenfeld, 1971; Howard, 1965; Osborn, 1969; Osborn & Whittick, 1969; Schlafer, 1969).

The root of contention in this work is that the interplay of the three factors of location, social balance, and self-containment, have in a large measure determined the type and extent of present migration to new towns. Furthermore, if the relationship between these factors, and their subsequent influence on migratory patterns is not now analyzed and fully understood, any national goal of new town construction could be seriously impaired.

The lack of agreement as to precisely what should constitute the criteria for a new town is evident at the definitional level. Below are presented two widely circulated definitions of what a new town is or should be. The first is from Clapp (1971:12):

Basically, new towns are envisioned as multipurpose suburban communities (as opposed to dormitory or bedroom communities) which provide for living, working, and recreating within the community. These communities would be socially balanced in terms of the relationship of their land use composition to community infrastructure. (Author's parentheses)

Contrast the above with the next definition provided by Robinson (1972:3), who says that a new town,

... should be relatively small in size, and self-contained with respect to living and working arrangements. Also new towns should be newly created on undeveloped land, be independent of any major metropolitan center, and provide all the requirements of day-to-day living. Finally new towns (so the concept goes) are to be balanced communities, not only in terms of employment and population and the provision of industrial, commercial, recreational, and residential areas, but also with regard to age, income, and class composition. (Author's parenthesis)

At first glance the definitions are somewhat similar. One important difference though is visible, and this is with regard to the locational aspect of these developments. Clapp sees them as primarily suburban communities while Robinson envisions them on newly developed land far from any large city. This point will prove crucial, as there are now

a number of scholars who see this trend toward suburban location as the first step to a series of glorified suburbs — not new towns (Fava, forthcoming; Rodwin & Susskind, 1973; Alonzo, 1970, 1973).

The New Community Act of 1970 (US, 1970) contains a number of standards for new town development. Included in these criteria are directions as to suggested and/or allowable locations for the developments, the maintenance of a community social balance, (also often called 'housing mix'), and the provision of an adequate industrial and employment base within the development in an effort to make the town as self-sufficient and self-contained as possible. At this point we will take up a discussion of the realities of these three concepts and their current effect upon in-migration to new towns.

New towns policy with regard to locational factors has always been a matter of some controversy. Discussions have usually turned on the point of what area would prove the type where benefits from the new town would be maximized in terms of a national policy. Below in brief form are the four major arguments for location of new communities. Notice that the suggestions in a large manner all hinge upon producing or directing some type of desired migrational flow.

- (1) New towns could be built to act as a receptacle for rural-urban migration, serving as a collecting point, outside the central city, so as to prevent the massive influx of ill-prepared people into our decaying cities.
- (2) We could build new towns in rural areas of lagging economy so as to improve the area's potential for economic development.
- (3) New towns on the fringe of our metropolitan areas would provide a needed alternative to our present suburban structures, and would serve greatly in organizing future urban sprawl.
- (4) New towns could be built to encourage the dispersal of concentrated populations from the inner-city.

Let me treat these arguments in order and set out the present situations on each.

The proposition that new towns could be built to receive our incoming rural migrants did receive some attention when the idea was first brought forth (Clapp, 1971:85). However, the idea receives little serious thought today as the flow of rural to urban migration has abated significantly, and the thrust of major moves has been from the central cities to the suburbs. This use of new towns, as Alonso notes (1970:6) as 'staging areas' for rural migrants on their way to our urban centers is quite out-of-date. Presently, this suggested purpose for new community construction receives little or no attention.

The argument in favor of the construction of new towns in rural areas with lagging economies is still very much alive and shows signs of even getting livelier. As Alonso reminds us (1970:8), this idea was originally put forward during the Johnson Presidency under the heading of 'urban-rural balance' and it proposed the construction of rural growth centers. There are presently several of these type new towns underway, and at this date the planners of the various developments still hold high hopes for eventually picking up the lagging economies of the areas involved (Gottschalk & Swann, 1970; Murphy, 1972). However there are those who believe that this form of new town is in trouble from the start, and Miller (1972:53) says, '. . . that many economists feel that efforts to promote self-sustained growth in sparsely populated areas generally are doomed from the start, the cost of providing the desired services being simply too great'. A variation of this theme, but inherent in the category definition is the 'free standing' new town. At present the government has seen fit to fund several of these developments, although at this point in time these developments remain just a small proportion of our nation's new community program. Included in this category would be Soul City, North Carolina; Midland, Kentucky; and Murrock, Arkansas (only Soul City has so far been funded) (Miels, 1973:27-29). As the category name implies, these are communities that are standing free of any major metropolitan area. While they will most probably improve the economy of any surrounding areas, they were in theory not specifically designed to achieve only that purpose. A good example would be that of Soul City, which, while one of its stated goals remains the improvement of the surrounding economic region (one of the poorest in Appalachia), it also is to provide a large showcase for Black capitalism.

One oft-voiced fear of critics and friends of the free standing new towns is that they could prove susceptible to becoming one-industry towns. This fear grows out of the fact that at its inception, the town is usually more or less reliant on one large industry to generate and sustain employment. Should other industries fail to follow suit and move in, and/or should the major pull out, the area might be worse off than before. So far, this situation has not occurred in any federally guaranteed development, although there are some American free standing new towns that are built primarily around one industry or company. The spectre that haunts advocates of new towns is the possibility that these developments could someday regress to simple company towns. I say regress, because in truth, the company town was a forerunner of the new town concept (Buder, 1967; Carden, 1971).

The idea of building new towns in suburban areas to help eliminate sprawl by giving the suburbanizing population an alternative choice in housing is quite plausible. To begin with, as noted by Lansing (1969: 68), '... any policy which increases the total supply of housing will be beneficial'. But as Lansing further states, this benefit will accrue largely to whites and will affect minorities in only a most attenuated form. The problem here is, that we may be falling into the trap of building glorified suburbs for whites, and federally financed at that. There is no doubt that the major portion of new town construction is currently occurring on the fringe of the metropolitan community, in effect producing a series of satellite cities around major central cities and their suburbs. Furthermore, if developers are adhering to the federal guidelines, or more importantly, are able to adhere, there should be no great threat of the devolution of our new communities into glorified suburbs. However, in building in the suburban ring, will adherence to federal criteria be possible? This will be a major point of discussion as this essay develops. In any case, since the major brunt of new community construction is currently occurring in the urban areas, we will have to assume that the planners initially assumed that it would be possible to achieve social balance and some form of self-containment.

Finally, one of the major validations for new towns development, and a major impetus also, has been the theory that the building of new towns should be performed to lessen the population crunch within the

established central cities. Indeed, this was one of the original driving forces behind the founder's concept (Howard, 1965:138ff). This particular aspect of new communities development has stood for a long time as a justification in the minds of many prominent new community advocates. For example, Weissbourd and Channick have alluded to the fact that the successful new towns program should bring about the end of the ghetto in America (Weissbourd & Channick, 1970:101). Robinson talks about creating exchange relationships for providing grants to those new towns that choose to accept and house ghetto residents (1972:25). Lyford concurs (1966-67:1334), believing that new towns could provide suitable shelter for those in our inner-cities. However, Miller disputes this (1972:56), saying that, '... (a) New Towns policy aimed at population dispersal may make little economic or political sense since its impact would be small and its desirability questionable. . . .' With regard to the present situation, Susskind (1973:304) notes, 'Few new towns approved to date have been designed to revitalize decaying central cities'.

It was obvious that there were certain assumptions made about the inner-city population with regard to decanting the central city: one was the fact that planners thought that the ghetto population would make the move, as anything would be better than where they were. A second assumption would be that these inner-city dwellers would possess the necessary skills to make a go of it in the new town, or failing that, there were to be industries in the new community that would employ large numbers of unskilled labor. Thirdly, it would seem that these planners believed that the ghetto population could rapidly adjust to the class differentials of the new environment. Lastly, the reverse of that was assuming that the upper and middle classes would accept their low-income neighbors. All of these assumptions are questionable, and will form the root of the following discussions.

In sum, these then are the arguments for new towns from the migration standpoint: new towns are receptacles for rural-urban migration, as centers to boost lagging area economies, as means to organize urban sprawl, and as a method to decongest the inner-city ghettos. At the present time, according to a recent list (Miels, 1973:27), the federal government has chosen to fund 15 new communities; one free standing,

two New Towns In-Town and 12 suburban satellites. As Murphy (1972: 10) points out, 'New Towns policy, as Title VIII, strongly favors peripheral rather than non-metropolitan growth. . . . Existing concentrations become the rationale for further concentrations; existing urbanization warrants further urbanization'. Apparently our national new town development has taken a decided bent toward the definition offered from Clapp earlier in this paper; that of a basically suburban-type development.

A second structure imposed upon the developers is that every new town funded by the federal government must do its utmost to assure itself of evolving into a development where all classes, races, and ages, are mixed with regard to housing opportunities. This is obviously a difficult standard to conform to, as prejudices learned over a lifetime are not easily erased. Some have argued that this kind of social balance is not possible at the micro-neighborhood level, although it is probably possible at the macro-neighborhood level (Gans, 1972:139ff); 1968: 183ff; Levine, 1973:52; Eichler & Kaplan, 1970:100). If it is not possible at the micro level and must be deferred to the macro level, then, in effect we could be creating a new town that would repeat our present mistakes in microcosm, with each different section of the new town delineated by income, much the same way our metropolitan areas are currently segmented.

Robinson defines social balance thus (1972:17), ' . . . it has come to include the notion of population heterogeneity with respect to age, occupation, income, ethnicity and class'. This concept originated again with the founders of the English new towns (Robinson, 1972:17), and has been expanded to currently incorporate what Robinson discusses above. Whether it has always worked well or not is another matter. In line with Gans' (1968:183ff) suggestions, Rouse planned his new town of Columbia to be socially mixed at the macro level but homogeneous at the micro level. In fact he put so much emphasis on strict income controls that eight years later he now finds his community growing too rich (Washington Post, 1974:C1) to be really classified as anything but a wealthy suburb. Lansing, Marans, and Zehner in their study of planned versus unplanned communities noted that in Columbia and Reston the figure of low-income could be taken to mean as below

\$15,000 a year (Lansing, et al., 1970:23). A similar result was obtained by Prestridge (1973:17) in which he found that in two California new communities, 73 percent of the population had incomes as families of better than \$15,000. It should be stressed that none of the above new towns were ever submitted to the government for loan approval, as all were begun prior to the passage of the 1970 Act. It might appear though, that these were the ones Rodwin (1973:127) had in mind when he spoke of glorified suburbs. Alonso and McGuire (1973:258) state,

Planned new towns appear to attract primarily a white middle-class which is highly educated and racially liberal. There appears to be no great difficulty in their acceptance of middle-class minority families. Low-income housing for families of whatever race (most of the poor are white) is another matter. (Author's parenthesis)

In another tract, Alonso (1972:238) has said of this educated middle-class, '... American new towns have attracted an egghead population and that this, together with the Hawthorne effect, voids any generalization from their social experiments'.

Eichler and Kaplan (1970:172) have also expressed strong doubts about the concept of housing mix. These authors concede that although the community is billed as a 'planned' community, what is 'planning' to the planner may be something entirely different to the resident or buyer.

Susskind (1973:293) writes, 'The balanced community explicitly recognizes the existence of the class distinctions but attempts to induce social mixing through physical proximity and the sharing of facilities'. Heraud (1968:35-36) basically agrees with Susskind's appraisal. Weiss (Weiss, et al., 1974:30-31) reached a conclusion, after comparing new towns and less planned environments, that one of the strong points that a new town possesses is precisely that it offers available housing for all groups and this ought to be encouraged through increased use of federal subsidies for low-income residents. Currently, American new towns experience a modicum of social balance. As noted previously, most new towns built prior to federal funding have not made great strides in their efforts to include all races, ages, and classes in their

developments. So the crux of the question now rests with those new communities, having acquired federal monies by agreeing to adhere to planning guidelines, are now in the process of including in their towns provisions for social balance. One tool that was made available to the developers of later new communities were the Section 235 and 236 federal housing subsidies for low and moderate income persons. It was originally thought that these could go a long way toward making social balance a reality, however, there have been problems of late with this (Rabinovitz, 1972:109), which will be more fully discussed further on.

The picture for social balance in American new towns seems to be thus: many planners and developers think that housing mix is an achievable goal if the mix can occur on the macro-neighborhood level. In most older American new towns, those that were established before federal legislation, some weak forms of housing mix have been attempted, but it has seemed to be only successful on the macro level.

The third of these factors to be considered for its effect upon migration, and vice versa, is the goal of self-containment. Robinson (1972: 12) defines self-containment as, '... a ... new town that has a complete range of urban facilities — sufficient employment, shopping, health education, etc.' In short, according to the traditional view, the situation whereby everybody who lives there, works there; and conversely, everyone who works in the town, lives there. This is the ideal, rather than the practical, yet it is worthwhile to note that as Howard saw it, this was to be a definite goal. In fact, the Reith Committee, (the committee responsible for much of Britain's post-war new town development), officially accepted the ideal as one of the goals to press in building England's developments (Ogilvy, 1968:40). Unless the migrant was promised employment, or already possessed a job in the new town, he was not allowed to move in as a matter of policy (Moss, 1968:118-119). Implementation of the concept in its ideal form has never really been achieved, although most developers have tried to push for the widest possible employment and industrial base in an effort to foster strong elements of self-containment.

Weiss and associates (Weiss, et al., 1974:24) found that the actuality of self-containment in planned new towns was only slightly better than that of unplanned environments. Their data did show, however, that a

free-standing community was much more likely to possess a higher degree of self-sufficiency than were the metropolitan-type new communities. The arguments for and against self-containment are numerous and varied. Clapp (1971:257) states that,

Generally, it appears that the notion is related in part to the location of new towns some miles distant from established areas (also considered desirable because of cheaper land costs and the avoidance of urban sprawl). The more remote the new town, therefore, the more it would have to be capable of providing for more of the range of needs of its inhabitants. (Author's parenthesis)

So it would seem that again, most arguments about self-containment revolve in a major fashion about the issue of location. If the location is far enough removed from any metropolitan center, as Robinson suggested in his definition of the new community, then there is a chance for the creation of a self-contained enterprise. However, when development is situated on the urban periphery the chances of the town being able to achieve any form of self-sufficiency are radically reduced. Robinson himself states that, 'The establishment of independent new towns that are self-contained or self-sufficient in terms of employment is a most difficult if not impossible achievement' (1972:25). Further he (1972:13) asks if, '...in regard to employment, the idea of the self-contained and self-sufficient new town is valid or attainable, especially given today's economic and technological developments'.

The current picture fairly well typifies the prevailing notions. Robinson (1972:16) states that,

The plans for new towns and city sectors developed in connection with the capital cities of Scandinavia are not based on the need for self-sufficiency with respect to employment. Instead the aim has been to provide as many jobs as possible without trying to seek a balance between employment and the working population.

So it is with the American new towns experience. Although federal stipulations command the developer to seek the broadest possible employment base with the most diversified industries he can muster

(in effect he is to strive for self-containment), a perfect match of jobs to housing is never required. Finally, Prestridge (1973:27) concludes,

Viewed in the context of functional interdependence, there may be no such entity as a 'self-sufficient' community, either old or new, and most certainly there is none in a populous metropolitan area.

With the individual examinations of these three factors concluded, we must examine briefly how their interaction can affect present migratory patterns to new towns. We have noted the fact that most current American new towns are now, or in the future likely to be, located on the periphery of major metropolitan centers, that they are going to attempt an effort at social balance even though up to now this has been accomplished only at the macro-neighborhood level, and finally, although they will strive moderately toward that goal. The discussion that follows attempts to reveal that there has been a break in the nexus between reality and policy, with regard to, new towns, and that this rupture is most evident in the interplay of these three factors as they clash with the realities assumed to exist in the policy of the Housing and Urban Development Act of 1970. The reasons for this rupture are that although the policy promulgated by the government was initially probably good, it failed to avail itself of the feedback originating from its on-going programs. In short, the limitations and mandates that were at first proposed were ideally suited to the traditional idea of new towns as expressed, for example, in the definition offered by Robinson, whereby new towns were seen as separated from any major metropolitan center, socially balanced and self-contained. This was possible, in the traditional sense, as the new community was far enough from the metropolitan area to be much more likely to achieve self-containment. Since this would reflect a wide range of employment opportunities, and since the town would be located beyond commuting distance to the central city area, there would have had to be provisions for the inclusion of lower-income housing in the development, as the industrial base would demand a number of unskilled or low-skilled workers. While there is no guarantee that these factors would necessarily result in the social balance, it can be said with some certainty

that the federal criteria would prove much easier to conform with under these conditions. The current situation, however, finds us dealing with a different set of realities. We are presently building the majority of our new communities on the peripheral edge of metropolitan areas, and by doing so, we effectively remove any real motivation for attaining any semblance of self-containment. In fact, with development so close to central cities, the necessity of self-containment is spurious at best, and we will endeavor to elaborate on how this effects the migration patterns. Finally, since no policy of self-containment is needed if development occurs next to large cities, then the likelihood of social balance diminishes as there may occur no need to employ low-skilled and unskilled workers with an industrial base not nearly so self-sufficient. Without the need of the usual contingent of such labor, and with the knowledge that if some are required they can commute between inner-city and new town, we have effectively removed the driving thrust from the movement to attain social balance.

I now propose to set out a list of propositions that seem to undermine the reality established in the federal legislation of 1970.

Initially, we turn to a proposition advanced under the rubric of 'decongestion of the central cities'. The belief has been that while wholesale decanting of the ghetto residents to new towns is not an option to be still seriously considered, many lower-income residents from the inner-city would avail themselves of the chance to better their housing situation and move to the new communities. Although this proposition was aimed at all poor, it especially had in mind the black population of our central cities. Basically, the argument went that low-income groups, when confronted with an opportunity to move to the new town, would automatically do so, as this was the best housing bargain that could be had for their restricted housing capital. It assumed that because the middle and upper classes were financially in better shape with regard to disposable money for housing, their opportunities were therefore greater and they could search out a wide range of housing markets with a greater freedom of choice than could usually be had by those in the lower-income brackets. However as conditions change within the Black community, this rationale will also no doubt alter. The US Bureau of the Census reported that for the first

time, as of 1970, according to income levels only, more than half of American Blacks could now be considered middle income. Time Magazine notes in a special section (Time, 19ff) that attitudes of Blacks are undergoing a corresponding change concomitant with their rising affluence. New towns are now not the only avenue of potential refuge from the inner-city. Most new towns are to be built within the metropolitan area of the larger cities, and we would assume that under the decongestion argument the new town in metropolitan fringe represented the most expedient way to begin to allow Blacks to leave the central cities. However, under a situation where fair housing laws are enforced, and many Blacks now of the middle income bracket, there is no need for Blacks to perceive their best choice as the suburban new town. Indeed, many of them have now the larger housing capital that permits the wider range of decision in location, and may elect to stay away from the new towns precisely because they will include elements of the lower classes, elements which will serve to remind them of their all-too-recent escape. Lawson firmly states, on the other hand, that (1971:40) 'As more central cities edge toward black majorities — there are three more than in 1970 — emerging Black leaders are taking a very dim view of suburban new towns which would welcome middle-class Blacks but price out the poor of all races'. We now have a double-edged sword, if we accept large numbers of Black middle-class people in our effort to achieve integration, and at the same time prevent the inner-city poor from availing themselves of the new town, we will not endear ourselves to the multitude still in the central city. However, if we choose to include large numbers of inner-city poor we may drive out potential Black middle-class buyers, a move that removes the possible social anchor that might be achieved if they were persuaded to join in the development. This is clearly a touchy situation as long as we continue to concentrate our efforts on new community construction in the metropolitan periphery continuing to demand social balance at the same time.

Still another issue related to the above problem is the fear of many emerging Black leaders in the central cities that new towns are just another method by the majority to dilute their potential political power. The fear is that by removing Blacks from the inner-city, recent

Black majority vote gains will again become the minority in terms of sheer numbers (Miller, 1972:56; Fava, forthcoming:22). Rodwin and Susskind (1973:129) note flatly that, 'New towns will become odious symbols if they are identified as devices for diluting the power of emerging inner-city majorities'. Again the dilemma: if we announce suburban new towns as convenient ways to channel Blacks and other minorities to the suburbs, we run the risk of creating great suspicion among Black leaders, who might conceivably then rise up against the developments on the grounds that they are siphoning off much needed money from the location of the real need — the inner-cities of our nation. A question that can still be raised is whether the blacks really want to live with whites, or for that matter, whether any minority is really desirous of cohabiting with the majority (Fava, forthcoming:20). Wolffe (1973:182-183) makes an eloquent case for this by remarking, 'In my opinion they (the inner-city poor) may not want a five-acre plot. They may rather prefer to sit in a small apartment in front of their TV set, drink beer and watch the Giants play'. (Author's parenthesis)

A study by Gary T. Marx (1967:175ff) has shown that many blacks would indeed rather live among their own social groups than venture into a strange new environment of mixed neighborhoods. Alonso and McGuire (1973:258) say that,

In the first place, in planned new towns all housing is new, and therefore economically inaccessible to those of low income. Subsidies can make that housing accessible, but the central cities, where most of the poor are, will naturally oppose major diversion of limited housing subsidies to new towns.

Susskind (1973:298) in discussing predictions about the future of new towns notes that a fear,

... was that new towns would undercut efforts to rebuild central cities. Not only have new town planning programs siphoned off money that might have been used to rehabilitate deteriorating core areas, but they also have skimmed off upwardly mobile workers who otherwise might have stayed behind and tried to improve matters.

The arguments as to whether development of new towns actually siphons off funds badly needed in the central cities depends, of course, on one's perspective, but I am sure that this particular controversy will only intensify. Finally, on this point, Heraud wraps it up succinctly (1968:20),

There is clearly a basic conflict between the development of New Towns as self-contained and balanced communities and the relief of the housing needs of large cities. If a self-contained and balanced population is required, then it is unlikely that this can be recruited from sections of the population most in need of rehousing.

The last element to be dealt with in regard to location and social balance is related to all the above factors by definition, yet is really more of an originally unintended consequence. This factor is known as 'trickle down'. Basically stated, the theory asserts that if we can move people out of the inner-city, the housing they vacate can then be used cheaply by those still further down the economic ladder, and their housing, in turn, can be occupied by someone below them on the ladder (Altshuler, 1969:49-50; Eichler & Kaplan, 1970:107). According to this theory, then, any general increase in the supply of housing will always act to benefit those at the bottom of the economic ladder, finally enabling the bottommost to abandon their dwellings entirely in favor of the next best (Lansing, 1969:68). Lansing however notes that this process is really only applicable to whites and affects Blacks only in a very strained fashion. He further states (1969:68),

The provision of housing for Negroes at the level which their present incomes justify will require either direct provision of more new housing units for Negro occupancy or measures which facilitate the transition of existing houses from White to Negro occupancy. It is not possible as matters now stand to rely on the sequences of moves resulting from new construction for the provision of housing for the Negro poor.

It would seem then that the value to be presumably gained via the trickle down effect by locating new towns in suburban areas would largely not accrue to those who might need it most. In terms of housing

construction, there will always be some type of building being performed in the suburban rings; whether it be new towns, planned unit development, or simple subdivisions, it will all act to further the purposes of 'trickle down' for the area's white poor. For the Blacks, however, whose access to suburbs, even with middle incomes, may prove problematical, the new towns could offer the direct provisions of housing, or the measures to facilitate the transfers that Lansing sets forth.

I believe it is safe to conclude then that physical location and aspects for social balance are inexorably intertwined, and that location will in many cases determine whether or not social balance as a goal has a better than even chance of succeeding. Currently, the federal government has given *de facto* approval to new towns built in or near the suburban ring, and as shown above, this apparently works in the opposite direction from the thrust of the New Communities Act, which mandates the inclusion of all forms of social balance into the community.

Much the same is also true with respect to policy and implementation in the area of self-containment. As has been shown earlier, although federal incentives do not necessitate complete self-containment on the part of the proposed new community, they do insist upon a diversified industrial base with a potential for a broad range of employment opportunities for all incomes and classes, all ages and races. Again, this is not an explicit goal of 'self-containment', but it would appear that to further the program, the government would like to see as many new towns as possible approach the goal of self-containment and self-sufficiency. As always there are some problems to be encountered in achieving even a moderate amount of success, and these problems are immensely exacerbated when the location of the new town is planned for a metropolitan area. To begin with, we must first analyze aspects of the labor market in general, and see how specific locational variances and site selection will alter the market *vis à vis* the new town. It is not a difficult argument to persuade someone that currently the best location for a labor market of unskilled labor is the central city. Here, among the major manufacturing plants lies the greatest potential concentration of employers of unskilled and semi-skilled labor. Not

surprisingly, it is here that the unskilled or semi-skilled laborer has the best opportunity of maintaining his wage. This is also the location where the secondary labor market is most fluid, and offers the widest possible range of choice. The secondary labor market is an important attribute for many inner-city unskilled and semi-skilled workers, as without the benefit of the wife's or child's income, many of these families would probably fall dangerously close to poverty levels. Using the combination of housing 'trickle down' and broadest choice of employment opportunities, Eichler & Kaplan (1970:172) conclude that the most advantageous location, in terms of economic factors, for the blue-collar worker is the inner-city. As Gans (1972: 146) puts it, '... working class people and poor people with little job security often prefer to live within easy access of all parts of the metropolitan area labor market, which is still best available (though less and less so) near the center of the city' (Author's parenthesis). What we now have to ask ourselves is, 'Will the economic opportunities for the poorly skilled or unskilled laborer improve with a move to a new town?' Again, we can see a locational factor as a major intervening variable. If we are talking about free standing new towns, the chances that these type of workers will find work is fairly good, for the more removed a new town is from any metropolitan center the less it can avail itself of the reserve of unskilled labor in the nearest central city, and the more it must be somewhat self-sufficient in order to ensure economic stability. Conversely, the closer the location to a major city, the less is the need to provide its own reserve of manual labor and the more it can draw upon the resources of the central city labor market.

One way to check upon this argument is to analyze the types of industrial concerns that have located in new communities. Originally our best data on this subject would come from the British experience, as it was their express policy to move industries from the central city to the new town to assure a goal of economic balance. The results of their experimentation have not been too promising. Heraud (1968:40) points out, 'Clearly firms desiring to move would be in the mobile industries and, in view of the chances for expansion offered by a move to a new site, also in developing sectors of the economy'.

With regard to American new towns, Miller (1972:49) has fore-

casted that, 'By 1970, professional and technically-employed persons will be the largest employment group in the new communities, followed by skilled laborers'. From Gans (1972:145),

The ability and willingness of the poor to move into new towns is more doubtful, even if they could obtain housing they can afford to buy (and maintain) or rent. Many would want to escape the slums, but they could come only if jobs were available for them. Since new towns have for the most part failed to attract industry, particularly that employing unskilled and semiskilled people, and since the location of the new towns makes them fairly inaccessible to other parts of the metropolitan labor market, it may be difficult to attract poor people to the new towns without special policies. (Author's parenthesis)

From all that has been said to this point, then, it would appear that the unskilled or semi-skilled worker will fare none-too-well in the future new communities.

Furthermore, it can be argued that if new community development does occur in a particular urban area, and if the developer is successful in luring industry from the central city to the suburban development, this does not preclude the possibility that many current employees of such an industry will not just simply shift the direction of their daily journey to work from their homes to the new town, instead of the central city. In addition to this point, the track record of current new towns in terms of lessening the journey to work, a major goal of self-containment, is less than sparkling. In the California communities that were surveyed by Prestridge (1973:21), 'The most consistently disappointing condition . . . was the trip to work'. Weiss and her associates (Weiss, et al., 1974:24) also found that on the average, the efforts of new communities to diminish their residents' journeys to work was not much greater than for less planned environments. She also remarks that, '... our data indicate that the only case in which a majority of employed household heads are likely to live and work in the same community is in isolated, free standing new communities'. This would seem to confirm our thesis concerning location and self-containment.

Another problem area in the nature of self-containment is how seriously the developer attempts to practice it. One could envision a situation in which a developer, in order to cast the most favorable light

possible on his community, would take an active hand in pressuring incoming industries to try and hire all available household heads. Fine so far as it goes, but if through the increased desire to provide as much work as possible for primary wage earners, the developers attempt to fit round pegs in square holes, it could prove disastrous for the community. I believe that the existence of a broad, well-paying secondary labor market is essential to the success or failure of the new communities. If the community powers-that-be attempt to fill positions within the secondary labor market with primary wage earners just to keep them working in the community, failure of the entire enterprise could result. It can well be argued that without the existence of a secondary labor market providing employment opportunities for wives and children, many families would never consider moving to the new town. For most of the lower income groups in the inner-city, owning a home of their own in the new town would be the largest financial undertaking of their lives. Without assurances that other members will be able to find and hold jobs in the development, many family heads would shrink away from the price of the unit. Rodwin (1973:128) notes, 'New towns must provide a choice of jobs for all primary and secondary wage earners'. It is my contention that while suburban developments will obviously never be able to provide employment for all primary wage earners, it is in their immediate interest and well-being to assure the existence of a secondary labor market. Eichler and Kaplan (1970:110) in discussing some California new towns indicate,

Although the hard evidence to document the point completely is lacking, it would seem that most of these lower-income employees are part of a family with more than one wage earner, so that the total family income is sufficient for the purchase of a home in Janss/Conejo'.

Lichfield cautions, (1972:58)

... the policies pursued by the development corporation make it unlikely that for the males who first emigrated to the new towns there will ever be a serious risk of unemployment on a scale abnormal to that of the population in general. These policies, however, were not necessarily designed for the employment of wives, nor were they primarily concerned with the problem of schoolchildren.

Finally, on this point, there are several good studies that focus on the existence and problems of the secondary labor market, and most point to the fact that when the hard times come, these jobs are the first to go (Flaim, 1973; Gastwirth, 1973; Miner, 1973; Flaim & Gellner, 1973). If it is the case that the secondary workers are the first to feel the pinch, it is no less a fact that the unskilled or semi-skilled workers are the next most vulnerable employment category. Then loss of jobs for all or most of the members of the low-income families is a distinct possibility in a tight economic era. If they reside in a new town built in the suburban ring, their only recourse is to try and attempt daily commuting to the best opportunity for work that they could discover during this period, and that would be no doubt in the central city. As Heraud (1966:17) notes, the potential cost of this calamity could be ruinous. In view of this, and the aforementioned problems, it is more than likely that many lower income residents will need more than cursory persuasion to risk moving to a suburban new town when they can see that the job situation is really the most stable and fluid in the central city.

Let me now turn to a brief discussion on the relationship of housing subsidies to both social balance and the goal of self-containment. It is to be noted that HUD has refused to earmark funds specifically to be given to new towns. As a result, developers applying for Section 235 and 236 federal housing subsidies are having to wait and take their turn in line (Rabinovitz, 1972:109).

Therefore, it is more than plausible that some promised subsidies may not arrive, radically altering the capability of the new towns to achieve any real amount of social balance. Secondly, the federal government has begun a drastic cutback in these housing subsidies, and it is not likely that the future holds more funding for these programs. At this point, subsidies currently being granted are being continued, but given the reluctance of the present administration to back these plans, no one can really say how long they will last. All this bodes ill for a lower-income person who does make the move to the new town, does find employment for himself and family, and then is told that his housing subsidy, soon to be up for recertification, will not be renewed.

It would appear then that physical location has a crucial influence

on the capability of the developer to really meet federal standards for new community construction and development. Yet the federal government guidelines seem not to recognize that a problem is simply being allowed to fester because the present criteria do not allow for varying standards of application and conformity due to differences in site selection, and this could tie the developers' hands at the point when he requires the utmost flexibility.

We now turn to a brief review of some relevant data that bears on some of the questions we have raised throughout this paper. The data will be drawn from two principal sources, and although the studies in question focused on a wide range of factors, we will limit ourselves to the areas directly under scrutiny. The first study was performed by J. A. Prestridge in 1973. His investigations centered on a comparison of six planned communities, four of which could properly be described as new towns, and the remaining two, retirement communities. The six towns were further divided by physical location. The initial three were all suburban-type developments, very typical of the major thrust of our current new towns development programs, and all three were located in California. These three were: Irvine, Mission Viejo, and Laguna Niguel, California. I would stress that all three of these towns were begun long before federal loan guarantees became available, so that in reality, they have never had to submit their plans to HUD for approval. However, all three do strive to imitate the usual new town qualities, and have made voluntary provisions for the inclusion of a wide industrial base and lower priced housing. Irvine, it might be noted, for many years was basically regarded as 'Columbia West'. The other three towns in Prestridge's study include one free standing new community, Lake Havasu City, Arizona, and two retirement communities, both in Florida, Port Charlotte and Deltona. Our purposes will best be served by limiting our review of the data to the four new towns. Again, I will point out for the record that Lake Havasu City was also initiated prior to the availability of federal funding, and therefore has also never been submitted to government review regarding the inclusion of certain community characteristics. As in the case of the California towns, however, McCulloch Industries, the developer of Lake Havasu City has attempted to include a series of typical new town features such as lower priced housing and an industrial base. This, of course, is almost

a necessity as the town is truly a free standing community.

The second set of data was collected from one of the first federally guaranteed developments, Park Forest South, Illinois. This data was assembled in a study conducted in 1972 by Brandt and, again, although the data covers a wide range of topics and attitudes, we will be only using that material dealing with the questions at hand.

Our first query is to the past and present inclusion of blacks in new towns. The Park Forest South sample (Brandt, 1972:21) included 196 dwelling units, with an approximate population of 850. The sample was weighted slightly in order that more than a random amount of Black families could be included and interviewed. On the basis of this sample, and corrected for the slight overrepresentation of Blacks, Park Forest South had a Black population of approximately 14.5 percent. This is a higher figure than would be obtained on the average from most other Chicago suburban developments. Since this constitutes a number three percent greater than in the national population for Blacks, we could say that we find sufficient Black representation in Park Forest South. Of the total development, however, only 8.2 percent of the families were earning incomes less than \$9,000. Using the Black population figure as 100 percent, we discover that only 10 percent (approx.) of the Black population was in this lower income bracket, if below \$9,000 can really be called low income. What it amounts to then is that of the total population in the sample of Park Forest South, only roughly 1.3 percent were Blacks earning less than \$9,000. It would be obvious that in Park Forest South there has been racial integration but a good socio-economic mix is quite another matter. It should be noted, however, that at the time of the interviews and study, Park Forest South was still relatively an infant in terms of overall development, and the developer did assure us that with the passage of time the figures on socio-economic mix would surely improve.

Although Prestridge has no specific data on socio-economic mix, one interesting note does arise from his data (1973:26, for details of sample see:6). When residents were asked to comment on any negative attitudes they possessed toward their community, the three California new towns, which had relatively few residents who earned less than \$8,000, showed an almost nil interest in the fact that their town contained a poor socio-economic mix. This situation reminds one very much of

Eichler and Kaplan's caution that 'planning' meant one thing to the people and quite another to the planners (1970:114). We might be able to draw the tentative conclusion, from our sample data, that although Blacks were moving into these three new communities, plus Park Forest South, it would seem that they were largely from the middle class.

It was also interesting to note the residents' reactions to questions about those in the lower-income brackets. When asked if they opposed the inclusion of subsidized housing in the new community, Park Forest South dwellers showed themselves fairly tolerant. Of the residents, 22.4 percent were opposed, 23 percent said that it might bother them, and 54.6 percent said that they would not mind the inclusion of lower-income people. In terms of a racial breakdown, the Blacks showed themselves to be willing to accept subsidized housing in better proportion than the overall population. At the time of the survey, 79.3 percent thought that it would be no problem, while only 10.3 percent were firmly opposed. The question was then asked again, in a slightly altered format. Recognizing that often there can be a discrepancy between attitude and potential reality, the query was rephrased with the inquiry shifted to future events. If they were given the choice over again to locate in any town, how many would prefer to locate in a community with subsidized housing? The change, although not drastic, was surprising. To this question, for all races, and for Blacks alone, there was a fair degree of slippage among those who would find this to present no problem. The breakdown was this way: those who said it would definitely bother them gained only a few percentage points, to 34.5 percent; but those who were undecided rose to 30.1 percent, with those who indicated acceptance of this idea of socio-economic mix, shrinking to 44.9 percent. Among Blacks, the number reporting themselves as opposed rose to 17.2 percent, while those in favor fell to only 55.2 percent of the sample.

It would appear then that the situation concerning socio-economic mix is still an undecided one. Although racial integration seems to be an accepted fact of life in our sample new communities, the lower income groups have not really made themselves felt yet in the developments. We did, however, come up with an intriguing sidelight in the Park Forest South study. It was noticed that when residents were questioned about their attitudes toward those in need of housing subsidies,

the image they often responded to was that of a 'welfare' family on their block, and the problems that that might present. In fact this was not the case. In checking both our sample and the qualifications for acceptance of anyone to be included in the subsidized housing, it became clear that 'welfare' persons would find it impossible to take advantage of these subsidies, although working poor could. To qualify for a subsidy, one must still meet certain income requirements, while though minimum, exceed that which could be presently obtained on welfare in the State of Illinois. Secondly, through a cross-match of the data it was found that the overwhelming majority of low-income residents were the aged living on fixed incomes. They had the necessary income to meet the minimum standards, and this was a way to get the best housing deal available for their money. The developer's staff indicated an awareness of this trend, and acknowledged that they expected a number of aged to qualify for subsidized housing in the future. The paradox is curious, for those who were asked their opinion of subsidized housing only could visualize it as a service to 'welfare' cases, never realizing that possibly somebody similar to their own parents could be the individuals who were receiving the monies and who might make up the greatest pool of candidates.

Indications were strong, however, as earlier suspected by this author that the majority of migrants to new communities, at least those towns in question, were not drawn from the inner-city. An easy proposition to put forth is that as long as new communities continue to be built in or near the suburban ring, their greatest possible pool of lower-income candidates will occur in the inner-city. The data, however, clearly show that for the new towns in both studies, the vast majority of residents came not from the central city, but from suburbs in many cases all but adjacent to the new community.

Prestridge (1973:14) shows that, in the case of the California new towns, all three developments received at least one-third to one-half of their in-coming residents from the suburban county in which all three are located — Orange County. Furthermore, if in-migration from all areas is added together, except for the immediate Los Angeles area (excluding Orange County), the total amount of migrants approaches the 75 percent margin. In excluding the Los Angeles area from these total figures we have not only excluded downtown Los Angeles but all the surrounding counties except Orange. One could say with reason-

able certainty that probably 10-15 percent of the remaining 25 percent of the migrants originated in the Los Angeles area, outside of downtown Los Angeles. This leaves, with the high figure used, probably not more than 10-12 percent of the in-migration flowing outward to the new towns from the central city. In the case of Park Forest South, 60.2 percent of the sample had previously resided in a Chicago suburb, while overall, 70.4 percent had previously lived in some suburb of any metropolitan area. Only 24.5 percent claimed the central city of any metropolitan area as their previous home, with only 14.3 percent of the townspeople having originated in Chicago's central city proper. In terms of the overall remaining number, 5.1 percent constituted those who claimed previous origin as rural. When queried if the prospect of better community services had been a strong inducement to move, only 26.5 percent said that the community services, or the prospect of them, had been a strong influence to migrate to the new town. The majority claimed that a combination of price factors and location had been their swing point. For Blacks, the percent influenced to move by the potential of better community services was much higher than the overall average, with their admission that for 48.5 percent of them the level of services to be provided was the strongest motivating factor.

Prestridge's free-standing community, Lake Havasu City, on the other hand drew only 6.2 percent of its in-coming population from an area within a 100 mile radius (1973:37). The Midwest contributed about one-third of the community's present population, with another third originating in the Pacific Coast region. An interesting note, also, is the fact that of the present population, only 4.4 percent originated in the same state as the development — Arizona.

With regard to the results of both studies, then, the new towns involved have not proven themselves to be a refuge from the inner-city, but rather a continuation of suburban development, albeit in a more organized sense. We do note the exception with regard to Lake Havasu City. It seems to suggest that the concept of the free standing community is more than viable, and could use a little more attention.

In speaking of self-containment, the outlook for the suburban new communities is about as gloomy as we thought. Prestridge (1973:21) notes the large numbers in the California new towns who must commute out to work. In Park Forest South, fully 83.7 percent of the labor force left the town every day. It would be wise to note that that

number could drop as the industrial base in the town solidifies (Brandt, 1972). Moreover, Weiss (1974:24) in her analysis of Park Forest South and Jonathan, Minnesota, reveals that in the two communities, only 18 percent of the household heads worked in the development. She also notes (Weiss, et al., 1974:24) that,

In addition our data indicate that the only case in which a majority of employed household heads are likely to live in the same community is in isolated, free standing communities. For example, among our sample communities, 95 percent of the employed heads of households in Lake Havasu City, a free standing community in Arizona, work in that community.

The data indicate that our initial doubts about the ability of suburban new towns to achieve even a modicum of self-containment or self-sufficiency are quite true. We further add that with lack of self-containment, social balance will prove an elusive if not impossible goal to realize. The free-standing new community appears to have more than an even chance to be self-contained to some extent, and therefore social balance would seem to have a more opportune chance to be brought about. Yet, we continue to require that both types of new towns conform to the same type of standards, when it is becoming more apparent that this conformity is going to prove detrimental to the suburban-type developments, when it appears obvious that under the present federal criteria, free-standing new towns possess the best chance for success.

In addition, as Rabinovitz (1972:109) and Solomon (1974) both note, the future of selected housing subsidy programs is more than in jeopardy. If we insist on building the vast majority of our new communities in suburban areas, where self-containment proves not to be a necessity, we are going to have to provide extremely liberal funding for subsidies to ensure the goal of socio-economic mix. Should these programs ever be discontinued, and it now seems more than likely that they will, then the drive to housing mix will probably falter badly and we will, indeed, wind up with a number of glorified suburbs where there should have been new communities.

There are, however, a few methods to combat this trend, but all provide for shifting the emphasis of federal policy, slightly or greatly, depending upon the programs affected. Initially, if we choose to continue to build most of our developments in the suburbs, we should

back off somewhat from even attempting to push for a modicum of self-sufficiency as far as household heads are concerned. However, if as Kaplan (1972) notes, working wives will play a large part in the ability of lower income residents to afford homes in the developments, then we can put a hedge against losing the housing subsidies by doing a great amount to ensure the creation and maintenance of a viable secondary labor market in the community. Since we are no longer pushing strongly for self-containment, we must create artificial pressure to facilitate social balance, and this of course, can be done specifically with housing subsidy programs aimed directly at the suburban-type new communities.

Secondly, and related to the above point, for as long as the subsidy programs are around, it would prove extremely helpful to the quest for socio-economic mix if we not only pushed subsidies for suburban new towns, but if also we gave the developers of the new communities some type of priority status on the waiting list of applicants for subsidy grants. To demand social balance as a condition of funds from one sector of the government, and then for another sector to refuse to aid in expediting these funds is a disastrous policy. As we pointed out, Rabinovitz (1972:109), among others feels pessimistic about the future merits of new communities precisely because of this type of governmental snafu.

Thirdly, it might behove us not to put all our eggs in one basket, as it were, and continue to fund suburban-type new towns to all but the exclusion of other forms of developments. In addition to the free-standing communities, which as we have noted seem to have a great chance of success in terms of the traditional approach to new towns, other types of developments such as the New Town In-Town should be funded. A good method to make sure that lower-income populations are included in any push for new housing is to press for more such developments as the New Towns In-Town (Perloff, 1972:160).

In an effort to enhance prospects for these other types of developments, HUD should make a concerted effort to create incentives for developers to come forward with well-designed plans for free-standing New Towns and New Towns In-Town. Incentives could occur in the form of additional grant funds to be made available, and/or the broad participation of a number of federal agencies whose task it would be to ease the developer's load. Also not to be overlooked is the potential

for a Regional Growth Center-type approach to continued funding of Title VII. As an alternative to completely free-standing New Towns, with their concomitant heavy frontal costs, a system of incentives could be put forth to encourage local and state officials to channel their growth efforts into Regional Growth Centers.

Finally, and again on socio-economic mix, if we really desire such a mix, we had better adopt 'active' versus 'passive' programs for getting the migration flow going the way we want it. The availability of lower-income housing in suburban developments is a good thing, but many in the central city — those most in need of this type of housing — will ignore the potential if all that is done are a series of low-key announcements about the housing being there. As we chronicled in this paper, there are a host of factors to be considered and overcome if we are to convince the folks in the lower-income housing brackets that the new towns might now swallow them up after all. An active approach could include the identification of a target population of potential migrants who would qualify on a priority basis for relocation to better housing. Then, programs should be developed to help these potential residents overcome any objections they might possess about the problems they could run into, both during and after the move. Such items as a good secondary labor market, the availability, if possible, of housing subsidies, assurances that their voice in community matters will be heard and will count, and more are all necessary if any approach is to work. In addition, to provide a fail-safe situation, all that can be done, should be, to ensure that the development possesses items like fast rapid-transit to the metropolitan labor markets for those new towns in the suburban ring, and financial planning assistance to those who desire it.

One last word on the nexus between reality and policy. Derthick (1972) has pointed out that already in its short history the American New Towns policy has experienced a fiasco. This was, of course, the ill-fated New Towns In-Town program of the Johnson administration. In this particular outing we can see about the largest gap separating reality and policy as we have ever seen. As Derthick concludes,

Failure resulted mainly from the limited ability of the federal government to influence the actions of local governments and from its tendency to conceive goals in ideal terms (Derthick, 1972:83).

It would be hoped that the possible approaches outlined above, when combined with a better understanding of the feedback generated by our present and future endeavors at new community construction, could do an immense amount to make certain that all our hopes for new town development in this country are not doomed to failure through mismanagement and lack of consistently good communications.

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